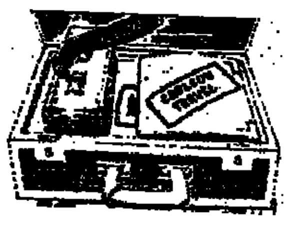

**Carlson and Accor**
*4,000 branches but will the tree grow?*
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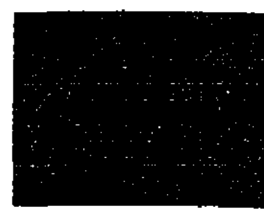

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*Leaving the arrogance behind*
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**In his own words**
*De Benedetti on the Italian elections*
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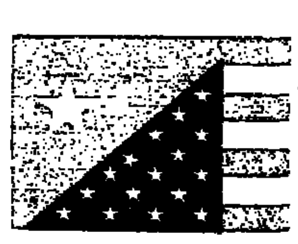

**China and the US**
*Who owes who a favour?*
Page 6


# FINANCIAL TIMES

Europe's Business Newspaper — WEDNESDAY MARCH 16 1994




## Fast growth in US puts spotlight on short-term rates

The US economy is continuing to expand rapidly, increasing the chances of another rise in short-term interest rates, figures from the Federal Reserve show. Industrial production rose an unexpectedly large 0.4 per cent in February, following a 0.5 per cent gain in January. The figures suggest industrial output is growing at an annual rate of 7-8 per cent in the first quarter. Page 14 and Lex

**Japan's US trade surplus falls:** Japan's trade surplus with the US fell for the first time in nine months in February, the Ministry of Finance said. The surplus was $4.34bn, a fall of 0.9 per cent compared with the same month last year. Page 4

**Bayer lifts German hopes:** Hopes of an end to the German chemicals industry's four-year profits slump were raised by better-than-expected earnings from the Bayer group. Pre-tax profits were down 12.6 per cent to DM2.35bn ($1.33bn). Page 15

**Sir Peter Inge to be UK defence supremo**

General Sir Peter Inge (left) became chief of the Defence Staff – Britain's top military officer – in succession to Sir Peter Harding, who resigned after newspaper allegations of adultery. Sir Peter Inge, 59, a Sandhurst officer who became chief of the General Staff two years ago, had been acting as caretaker military adviser to the government. He becomes a field marshal. Page 8

**China wanted in Gatt:** Members of the General Agreement on Tariffs and Trade, with the exception of the US, expressed strong support for an early resumption of China's Gatt membership. Page 6

**Italian journalists strike over pensions:** Italian journalists began a four-day strike in protest over plans by the government to place some of the surplus in the journalists' pension fund in the main state-operated pensions scheme. Page 3

**Portugal's consumers hit banks:** Portugal's consumers organised a 24-hour boycott of direct debit cards in protest at an attempt by banks to charge commission on use of the cards. Page 2

**Germany to lose 100,000 engineering jobs:** Export growth will help Germany's engineering industry increase sales by 2 per cent this year, but a further 100,000 jobs will be lost before a recovery emerges in 1995 or 1996, according to the VDMA industry association. Page 2

**Nine Somali bandits killed:** Indian peacekeeping troops In Mogadishu shot dead nine Somali bandits who attacked a relief convoy.

**Deloitte to pay $312m damages:** Deloitte & Touche, US accountancy firm, is to pay $312m to settle a string of government charges that it failed properly to audit several banks and savings and loan institutions which collapsed in the 1980s. Page 4

**Wolseley** of the UK, the world's biggest supplier of heating and plumbing equipment, reported an 83 per cent rise in interim pre-tax profits to £87m ($127m). Page 16; Lex, Page 14

**Mirror Group Newspapers** of the UK marked its independence from administrators and the legacy of the late Robert Maxwell with higher than expected pre-tax profits of £73.8m ($107.7m). Page 16; Lex, Page 14

**Brussels to act on telecoms ventures:** The European Commission said it intended taking a more active role in policing joint ventures in the fast growing telecommunications market. Page 14; Merchant bankers brave disdain of Athens, Page 2

**Rail costs disclosed:** Companies which take over British Rail's passenger operations can expect to pay about £500m ($730m) a year to lease trains in addition to the £2.2bn they will pay for the right to use the rail network. Page 7

**Lyonnaise des Eaux-Dumez,** French utilities and communications group, reported net profits for 1993 more than doubled at FFr800m ($133m). Page 15

**Fire hits California phones:** A fire in a telephone switching centre disrupted telephone service to hundreds of thousands of people across southern California.

**■ STOCK MARKET INDICES**

| | | |
|---|---|---|
| FT-SE 100 | 3,267.4 | (+34.0) |
| Yield | 3.70 | |
| FT-SE Eurotrack 100 | 1,469.35 | (+12.76) |
| FT-SE-A All-Share | 1,646.57 | (+0.8%) |
| Nikkei | 20,506.85 | (-17.30) |
| New York lunchtime: | | |
| Dow Jones Ind Ave | 3,850.82 | (-2.16) |
| S&P Composite | 468.19 | (+0.80) |

**■ US LUNCHTIME RATES**

| | |
|---|---|
| Federal Funds: | 3⅜% |
| 3-mo Treas Bills: Yld | 3.642% |
| Long Bond | 91 13/16 |
| Yield | 6.887% |

**■ LONDON MONEY**

| | | |
|---|---|---|
| 3-mo Interbank | 5 7/16% | (same) |
| Liffe long gilt future: | Mar 113 | (Mar111⅝) |

**■ NORTH SEA OIL (Argus)**

| | | |
|---|---|---|
| Brent 15-day (May) | $13.595 | (13.355) |

**■ Gold**

| | | |
|---|---|---|
| New York Comex (Apr) | $387.6 | (387.2) |
| London | $386.25 | (387.1) |

**■ STERLING**

| | | |
|---|---|---|
| New York lunchtime: | | |
| $ | 1.4915 | |
| London: | | |
| $ | 1.4915 | (1.4945) |
| DM | 2.53 | (2.5254) |
| FFr | 8.5984 | (8.5799) |
| SFr | 2.15 | (2.1409) |
| Y | 158.323 | (158.238) |
| £ Index | 80.7 | (80.6) |

**■ DOLLAR**

| | | |
|---|---|---|
| New York lunchtime: | | |
| DM | 1.69825 | |
| FFr | 5.7725 | |
| SFr | 1.44345 | |
| Y | 106.135 | |
| London: | | |
| DM | 1.6963 | (1.6898) |
| FFr | 5.765 | (5.741) |
| SFr | 1.4415 | (1.4325) |
| Y | 106.150 | (105.880) |
| $ Index | 66.3 | (66.1) |

Tokyo close Y 106.38

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Austria | Sch22 | Greece | Dr350 | Lux | LFr65 | Qatar | QR13.00 | | |
| Bahrain | Din1.250 | Hong Kong | HK$18 | Malta | Lm0.60 | S.Arabia | SR11 | | |
| Belgium | BFr65 | Hungary | Ft185 | Morocco | MDh15 | Singapore | S$4.30 | | |
| Bulgaria | Lw25.00 | Iceland | IKr215 | Neth | Fl 4.00 | Slovak Rp | KSL50 | | |
| Cyprus | C£1.10 | India | Rs60 | Nigeria | Naira50 | South Africa | R12.00 | | |
| Czech Rp | CZK50 | Israel | Shk6.90 | Norway | NKr17.00 | Spain | Pta225 | | |
| Denmark | DKr16 | Italy | L3000 | Oman | OR1.50 | Sweden | SKr18 | | |
| Egypt | E£5.00 | Japan | Y500 | Pakistan | Rs40 | Switz | SFr3.30 | | |
| Finland | FM14 | Jordan | JD1.50 | Philippines | Pso50 | Syria | S£50.00 | | |
| France | FFr9.00 | Kuwait | Fils.625 | Poland | Zl 32,000 | Tunisia | Din1.500 | | |
| Germany | DM3.50 | Lebanon | US$1.50 | Portugal | Es225 | Turkey | L73000 | | |
| | | | | | | UAE | Dh12.00 | | |

# Microsoft reorganises to meet market challenges

By Alan Cane in London

Microsoft of the US, the world's largest personal computer software company, yesterday announced a worldwide reorganisation to improve decision making and market responsiveness.

It said the new structure was necessary to achieve its goal of doubling sales over the next four years. Last year the company had net income of $953m on sales of $3.75bn.

Microsoft says the reorganisation will not lead to job losses, unlike many computer companies which are actively cutting staff. "It will not reduce our overall headcount, but it will allow us to grow without increasing our headcount as much as our current organisation would require", the company said.

A memorandum sent to employees says the company could seize "incredible opportunities" in the next few years, but implies that competitors, including Lotus and Novell, are superior in sales and marketing: "We cannot just follow and react to what others are doing".

Restructuring is expected to take between two and three months with all the key elements in place before the start of Microsoft's new financial year in the autumn.

The company denied the reorganisation was a response to an investigation of its business practices being carried out by the US Justice Department. Last year, the US Federal Trade Commission failed to agree whether to proceed against the software company after more than three years of investigation of whether Microsoft had abused its position as market leader.

Microsoft, boosted by sales of MS-Dos and Windows personal computer operating software has shown quarterly earnings growth of between 25 and 55 per cent over the past few years. In the first quarter of the current year, however, growth slowed to 14 per cent, causing analysts to suggest that the company was maturing and that competitors were eating away at its market share.

The reorganisation is designed to accelerate decision making, simplify its marketing messages to customers and business partners and improve business efficiency. Seven product groups are to be created to cover, for example, personal operating systems and desktop applications. New customer units will have responsibility for individual computer users, organisations and companies which build Microsoft software into their own products.

Microsoft believes central Europe could become its single largest market with the potential of $1bn in yearly sales.

Regrouping to get closer to the customers, Page 18

# G7 urges IMF to release $1.5bn for Russian reform

By John Lloyd in Moscow

The Group of Seven leading industrial countries, fearful that the Russian economy may collapse, are pressing the International Monetary Fund to agree to lend the second $1.5bn tranche of its fund to assist reform.

Mr Michel Camdessus, IMF managing director, is expected in Moscow tomorrow. During his five-day visit he will have to decide whether to recommend to the fund's board to pay the second tranche of the systemic transformation facility or again delay payment because of fears that the budget will not be adhered to and that inflation – down to a monthly 9 per cent in February – will again soar, as expected.

A continued fall in production and the huge indebtedness in Russian industry have meant that government income is running at half of the budgeted figures for the first two months of this year.

Meanwhile, powerful lobbies, especially the military, are demanding higher allocations than the present budget allows – with General Pavel Grachev, defence minister, warning that his troops will go unfed unless the allocation to defence of Rbs37,000bn ($21.6bn) for this year are more than doubled.

One senior western financial expert in Moscow said yesterday: "The base to support the infrastructure of the country is shrinking and at some point soon you will not have enough resources to support the minimum services."

Mr Victor Chernomyrdin, prime minister, has sought to impress on the IMF – which has a team negotiating with Russian ministers in Moscow – that he and senior colleagues are at least as pro-market as radicals such as Mr Yegor Gaidar and Mr Boris Fyodorov, who left the cabinet this year.

The G7 countries had relaxed their pressure on the IMF and the other international financial institutions such as the World Bank to lend to Russia after the December elections, as the outcome led them to believe that further reform was unlikely.

Mr Chernomyrdin has drawn up a list of companies to be declared bankrupt, has enthusiastically endorsed the sell-off of state and collective farms to individuals, and says he will repel all advances from the military.

Continued on Page 14

Welcoming hands greet Nelson Mandela in Mmabatho, capital of Bophuthatswana. Page 14 Reuter

# EU expansion talks face collapse as UK holds out

By David Gardner in Brussels and Roland Rudd in London

Talks among European Union foreign ministers to settle the row over power-sharing if the 12 take in four new members next year were on the verge of collapse last night, with the UK holding out for yet another meeting to settle the issue.

Any further delay on the voting rights dispute might sink chances of Austria, Finland, Norway and Sweden joining the EU next January as planned, and brake the momentum behind the Union's expansion.

The UK, which with Spain is resisting any dilution of its right to block decisions in the EU Council of Ministers, predicted last night that further negotiation would be needed – possibly at a summit of European leaders.

A senior British government official said: "There will be another meeting, but we don't know the level, the time or the place." But he made clear that the government could not yet work its way around the voting rights dispute, which it acknowledges may sabotage prospects for the "wider Europe" London says it espouses.

"You have to realise how [any weakening of UK veto rights] could play in Westminster" among right-wing, Europhobic members of the British parliament, the official said.

Mr John Townend, chairman of the powerful Tory backbench Finance Committee, said opposition to watering down Britain's rights was spread right across the party. "This is a case of blackmail, to put it bluntly. The Commission is proposing watering down voting rights to have enlargement of the Community."

Mr John Major, the UK prime minister, asked in parliament to clarify the government's negotiating position at the foreign ministers' meeting, said: "What we need to ensure is that democratic legitimacy and the rights of minorities are sustained within the European Union."

One rightwing backbencher said privately: "The prime minister has been told that he risks his majority in the Commons if he allows the Foreign Office to agree to any compromise over our blocking veto."

However, Sir Norman Fowler, Conservative party chairman, predicted that there would be no revolt by Conservative Euro-sceptics over UK voting rights in Europe.

In Brussels, enormous pressure was being placed on the British, including calls for a vote that would expose them as the obstacles to the move from a Europe of 12 to 16. Germany, France, the Netherlands and Denmark all suggested that those who opposed the will of the EU majority on how to manage this first stage of expansion should "go away and reflect", as the Danish foreign minister, put it.

The UK wants to change the proportion of weighted votes in the Council of Ministers needed to block EU laws and regulations. Currently, 30 per cent of the votes – distributed roughly according to size among member states – can form a "blocking minority".

Ian Davidson, Page 12

# Jobs summit promotes free trade and labour flexibility

By George Graham, David Goodhart and Stephanie Flanders in Detroit

Ministers from the Group of Seven leading industrial nations agreed yesterday that free trade, labour market flexibility and a stable economic environment were essential to tackle the persistent unemployment that has afflicted all their economies.

However, the unprecedented two-day conference in Detroit produced "no single solution, no one idea or action that will work for every country," said Mr Lloyd Bentsen, the US Treasury secretary and meeting chairman.

The conference yielded a consensus that countries must balance the right macroeconomic policies with measures to attack structural joblessness.

"Structural reforms can make our labour markets and employment systems far more adaptable to change. We need, carefully and in our own ways, to pursue policies to take down barriers and to strengthen our markets," Mr Bentsen said.

Ministers agreed on the need to improve the education, training and skills of their workforces, but Mr Bentsen warned that the G7 countries could produce all the highly trained workers they wanted, "but it does no good unless we've created the climate in which the corporate world has jobs waiting for them".

■ Lucky few hog the jobs in the summit city Page 4
■ Editorial Comment Page 13

The Detroit conference's conclusions will form the starting point for the sherpas preparing July's summit meeting of G-7 leaders in Naples. But beneath the apparent harmony, divisions emerged, particularly on the relative importance of government and the private sector.

"I won't say that there were sharp exchanges, but there were some courteous sharp disagreements," said Mr Robert Reich, the US labour secretary.

Participants said the meeting had brought together labour and finance ministers who in some countries seemed scarcely to speak to each other, and the mix had produced some very frank discussions.

Among the most radical ideas that received support was a suggestion to allow employees to work a fixed number of hours in the year, rather than each week, allowing greater flexibility both for employers to deal with seasonal variations and for workers to plan their own free time.

"At a time when modern technology gives us more and more flexibility, why should work time still be planned as it was at the beginning of the industrial revolution?" said Mr Henning Christophersen, European Commission vice-president.

Mr Bentsen said ministers had agreed to ask the Paris-based Organisation for Economic Co-operation and Development to study the relationship between productivity, technology and job creation and to expand a study already under way to improve statistics on joblessness in the industrial world.



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BUSINESS BOOKS An academic manqué
In place of collective bargaining

# Balladur settles feud on defence

By David Buchan in Paris

Prime Minister Edouard Balladur has settled a feud between his defence and budget ministers over future military expenditure by deciding that armaments spending should rise annually by 0.5 per cent in real terms until the end of the century.

Mr Balladur engineered the compromise as the government prepares to present to parliament next month the 1995-2000 military framework law. This does not absolutely tie a government's hands over annual defence budgets, but since France is likely next year to elect a president from the ranks of the governing coalition - even perhaps Mr Balladur - it will be a good guide to future defence spending.

Mr Francois Léotard, the defence minister, had pushed for a rise in military equipment spending of 2.5-3 per cent a year, taking as his text the *recent government-approved* defence white paper. It said real "annual growth of at least 3 per cent" was needed to fund all programmes underway, though it acknowledged greater efforts could be made to keep arms suppliers' charges down and foresaw some savings through "a certain pause" in modernising France's nuclear deterrent.

*Mr Nicholas Sarkozy, the* budget minister, argued that the armed forces should be subject to the same financial discipline as the civil sector. The government's five-year fiscal programme, designed to fit France to enter monetary union with Germany and other European partners by the late 1990s, calls for an average 0.4 per cent cut in public spending in each of the next three years.

Mr Balladur's decision to allow arms spending to continue to rise modestly will appease the strong defence lobby inside the government coalition, but will mean more severe cuts in civil programmes. France's 1994 defence equipment budget of FFr100.4bn (£11.5bn) is already higher than that of other European allies, with Britain planning to spend about 60 per cent - and Germany only 27 per cent - of the French level this year, according to French defence officials.

President Mitterrand's two-year old moratorium on French nuclear tests in the south Pacific has provoked strong complaints from within *the government majority, but* without saving much money because the government has started research into laboratory simulation of such tests. The Elysée yesterday welcomed President Clinton's decision to prolong until autumn 1995 a similar moratorium.

Another general drain on the defence budget has come from France's heavy involvement in United Nations peace-keeping operations in ex-Yugoslavia and elsewhere. Last year this cost France FFr7bn, of which only FFr1.5bn will be reimbursed by the UN.

● The German government yesterday approved new guidelines for the armed forces which call for the build-up of rapid-reaction forces under *Nato's post-cold war strategy* of crisis management, Reuter reports from Bonn.

The guidelines, laid down in a policy document to be published next month, spell out Germany's new international role after unification and detail changes in the military force structure. "This is the first building block of the future Bundeswehr (Federal Armed *Forces)," Mr Volker Rühe,* defence minister, said. There were instances in international crisis management where "military means are necessary to prevent, limit or end violence," he said.

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# Merchant bankers brave disdain of Athens

## The Greek socialists know they must pay the price as telecom sell-off brings back the fee seekers, writes Kerin Hope

Undeterred by Greece's failure last year to carry out a planned partial flotation of the state telecommunications company, OTE, western investment bankers are pushing back into Athens for another try.

With the socialist government committed to relaunching its conservative predecessor's privatisation programme, to help cover a rapidly widening budget deficit, the sale of 25 per cent of OTE is being set provisionally for October.

However, plans for the flotation are still vague, not least because the socialists, after their election victory last year, sacked the previous government's two leading advisers on privatisation, N M Rothschild and Credit Suisse First Boston, without appointing a replacement.

Moreover, in the absence of Mr Giorgos Gennimatas, the economy minister, who is undergoing treatment for cancer, the prime minister, Mr Andreas Papandreou, has not indicated who will be responsible for awarding the mandate for the OTE sale.

It will be a delicate political decision, given the opposition to the sale voiced by OTE's powerful trade union, and a prevailing mood of hostility towards foreign investment bankers within the ruling Panhellenic Socialist Movement (Pasok).

A senior socialist official said: "We're naive perhaps, but we were shocked at the size of the fees the conservatives were prepared to pay to foreign consultants."

Both Rothschilds and CSFB were advising the previous government on its plan to sell a 35 per cent strategic stake in OTE to an international operator.

In addition, CSFB and J Henry Schroder Wagg were appointed global co-ordinators for the flotation of another 14 per cent of the company on the Athens stock exchange, expected to raise about Dr100bn (£274m). Rothschilds, together with Morgan Stanley and Paribas, were originally appointed joint lead managers of the offering's international tranche. But both the sale and flotation were cancelled when the conservatives lost power in the general election last year.

The socialists' disdain for international advisers extended to firing Arthur Andersen, the accountants, who were preparing OTE's first audit up to international standards.

They are to be replaced by auditors from SOL, a quasi-government body of Greek-sworn accountants.

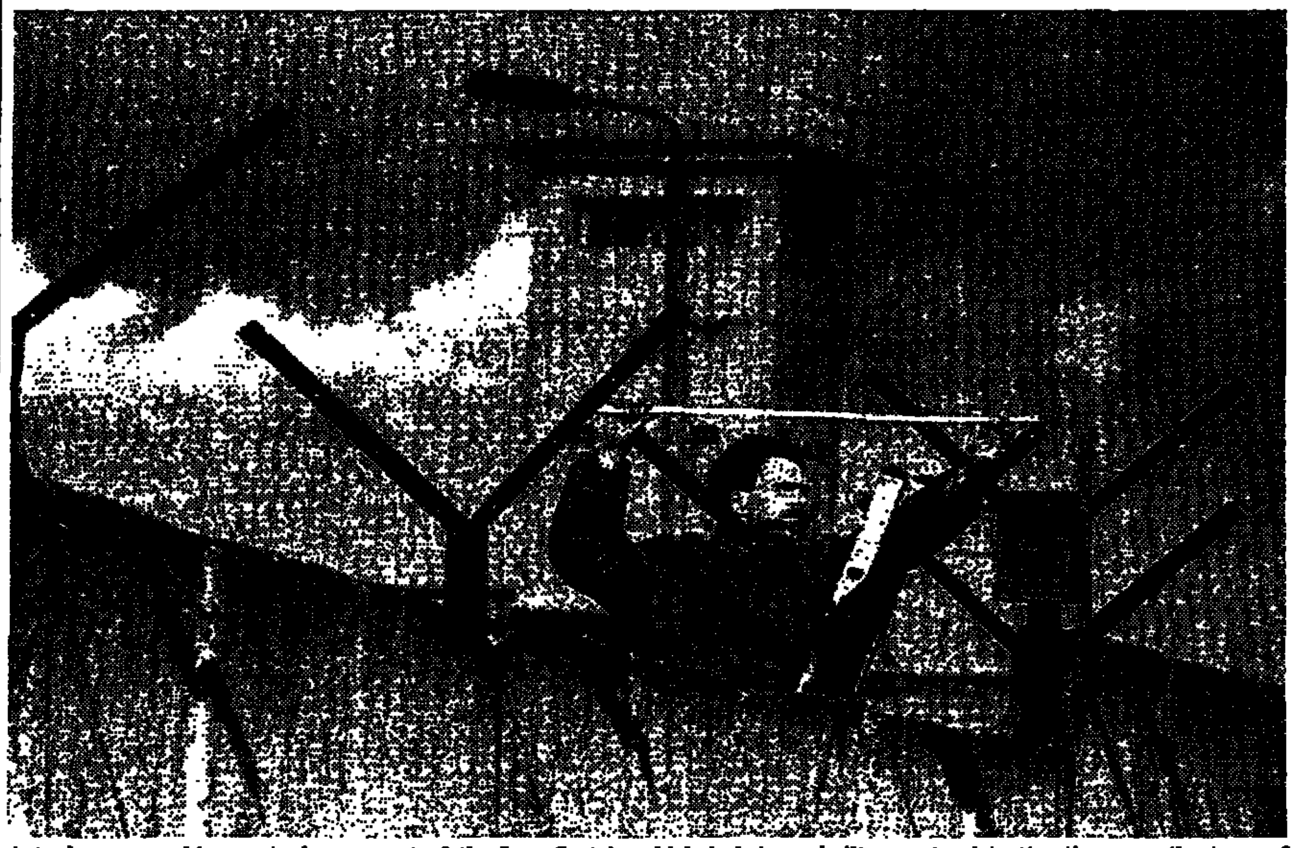
Nevertheless, economy ministry officials now accept the need to appoint an international bank as co-ordinator to ensure the success of what will be the largest local offering to date.

However, the ministry is already admitting that political criteria will affect the final choice. "Obviously, we can't reappoint the old team, even though a few players may be asked to participate again," a government adviser said.

Almost all the banks previously involved have submitted fresh proposals. However, confidence is strong among newcomers, among them Bear Stearns, Lehman Brothers, Barings and Barclays de Zoete Wedd.

The government hopes to realise Dr250bn from the OTE sale, with up to 60 per cent of the issue being placed abroad.

"They appear to be counting on the current appetite for telecoms issues among international investors to offset delays in restructuring old-fashioned management and a lack of transparency in the accounts," said one analyst.



A tradesman working yesterday on part of the Iron Curtain which is being rebuilt as a tourist attraction near the town of Hötensleben, west of Berlin. Most of the barrier was torn down after the Berlin Wall was breached on November 9, 1989 Reuter

## GERMAN TOWN ANGERED BY NEW IRON CURTAIN

The euphoria in the eastern German town of Hötensleben, some 185km west of Berlin, when the Iron Curtain was dismantled has turned to amazement and anger since their local leaders decided to rebuild part of it as a monument to the cold war, Reuter reports from Berlin.

Eager to halt the decline of Hötensleben since German unification, a small group of civic dignitaries last year began rebuilding a 330-metre (1,080ft) section of the "death strip" which kept east Germans from escaping to the west. Hoping to slow a sharp rise in unemployment and reverse a demoralising westward migration of many of its 2,600 citizens, they decided to capitalise on the town's isolated location during the cold war with a unique tourist attraction.

They have spent DM135,000 (£52,500) – some of it government money – to repair and rebuild it, complete with guard towers, spotlights and attack dogs.

"It's pure insanity," said Dr Franz Wehe, a retired surgeon who lives next to the rebuilt wall. "That damn thing was here for 30 years so why do we have to look at it now?" Nearly 500 people in Hötensleben have signed petitions protesting against the monument.

The monument was to have been completed by 1996 but the protests brought a quick halt to federal funding. Annoyed and undaunted, the proponents are seeking DM300,000 in private funding to complete the monument.

# SPD election victor puts party on alert

By Quentin Peel in Bonn

A supremely self-assured Mr Gerhard Schröder, the victorious Social Democrat prime minister in the state of Lower Saxony, *swept* into Bonn yesterday to warn his party colleagues against over-confidence in their own coming election campaigns.

It was a moment of vindication for Mr Schröder, who was defeated last year in the contest to become national leader of the Social Democratic party (SPD) by the altogether more modest Mr Rudolf Scharping, *the state premier of the Rhineland-Palatinate.*

This time he was coming back as a winner from the very first poll of Germany's 1994 election marathon, which will see 18 more polls culminating in the general election on October 16.

His emergence from Sunday's state election in Lower Saxony with an absolute majority – albeit only of one seat – means that he can rule without any coalition partner. That is a luxury enjoyed by the government in only five other states of the 16 in the federal republic.

Mr Schröder was magnanimous in his victory. He paid tribute to the Greens who had been his partners in the first red-green coalition in Germany, and will undoubtedly still be needed to provide some support for his wafer-thin majority. At the end of Sunday night, his SPD had won 81 of the 161 seats in the Hanover-based state parliament, against 67 for the Christian Democratic Union, and 13 for the Greens.

The biggest losers were the Chancellor Helmut Kohl's CDU, which lost 5.6 percentage points to win just 36.4 per cent of the vote, and the Free Democratic Party (FDP), his coalition partner in Bonn, which failed to gain the minimum 5 per cent needed to win any seats at all.

**One man had shown he could make a difference for the CDU; the arrival of Mr Kohl himself showed that the ruling party could still boast a notable campaigner**

Yet Mr Schröder's main warning was to his own SPD party colleagues, not to relax in the forthcoming election campaigns and regard them as good as won.

And he spoke out strongly against national policies which might prove disastrous vote-losers in the campaign, such as a national speed limit on the autobahns, and an increase in taxes on petrol and oil products.

Mr Schröder, whose victory is seen very much as a personal triumph, admitted he was facing an exhausted CDU in Lower Saxony, with a serious shortage of personalities in its leadership.

Yet one man had shown he could make a difference in the *last two weeks of the* campaign, he said: the arrival of Mr Kohl himself showed that the ruling party could still boast "a notable and battle-hardened election campaigner" who should never be under-estimated.

It was no doubt a neat reminder to his erstwhile SPD rival, Mr Scharping, about the harsh struggle ahead. Mr Schröder pledged his loyal support to his national leader, but he firmly ruled out any future role in Bonn for himself.

He was speaking just five days before the next test in the election marathon, when 2.1m voters in the state of Schleswig-Holstein must elect new local councils on Sunday – and where the SPD itself is facing a backlash in the polls.

State officials of the CDU are hoping to push the SPD into second place and to emerge once again as the largest party, reversing the positions of 1990.

The biggest loser from the Lower Saxony election was the Free Democratic party, which failed to gain even the minimum 5 per cent needed to win seats in the state parliament.

And in spite of its loss of power in the coalition, the biggest winner was the Green party, which pushed up its vote from 5.5 to 7.4 per cent.

# Exports boost for engineering sector in Germany

By Christopher Parkes in Frankfurt

Export growth will help Germany's engineering industry increase sales by 2 per cent this year. But a further 100,000 jobs will have to go, and a sustained recovery will not emerge until 1995 and 1996, according to the VDMA industry association.

Stronger growth was not possible because of weak domestic demand, and the industry's average net return on sales of less than 1 per cent was too low to finance investment, modernisation and new jobs, Mr Jan Kleinewefers, association president, said.

Growing demand from outside Europe for German machines had been apparent for a year, and in the past two months there had been signs of a change for the better in west European orders, which were no longer slowing, he said.

However, average capacity utilisation was still at a record low of 75.6 per cent at the end of last year. Only four sectors – steel plant, textile, packaging and woodworking machinery – were working at satisfactory rates of 85 per cent or more.

Highlights of last year – the worst since the war, and marred by a 11 per cent slump in industry-wide sales to DM209bn (£81.3bn) – included a 10 per cent increase in sales to the US, Mr Kleinewefers said. The US was now the industry's biggest single foreign market. Exports to China doubled to DM4bn, helping bolster sales to east Asia by 15 per cent. However, domestic orders fell a real 15 per cent, and a drop of 13 per cent in demand from other European Union countries meant total foreign orders rose only 1 per cent.

Turnover from export deliveries fell a real 7 per cent to DM110bn, but machinery imports also shrank 12 per cent, leaving the sector showing a trading surplus of more than DM50bn. Between the onset of the recession in 1990 and the end of last year, the plant and machinery industries – second only in terms of sales to the automotive sector – had seen output fall by 20 per cent. Some 200,000 jobs had been lost in the west of the country.

## Consumers boycott debit cards in protest against surcharge

# Portuguese take on banks

By Peter Wise in Lisbon

Portugal's hard-pressed consumers took on the country's big banks yesterday – organising a 24-hour boycott of their widely used direct debit cards in protest at an attempt by the banks to charge commission on use of the cards.

They were responding to an angry appeal by consumer *associations, supermarket* chains, petrol stations and other businesses to protest against a decision by banks to charge a commission of 1 per cent on purchases made with the cards.

Shop owners said banks would earn Esc8bn (£30.7m) to Esc10bn a year from the charge, due to be levied from April. They warned they would *be forced to* pass on the extra cost to consumers because retail profit margins were already low.

The Multibanco card system in Portugal, considered the most advanced in Europe, allows consumers to shop, pay utility bills, dine out and book train tickets without using cash or cheques. The cost is immediately debited from their bank accounts and paid into the account of the supplier.

The system, run by Sociedade Interbancaria de Servicos (SIBS) for almost all Portuguese banks, provides 3,000 automatic teller machines countrywide where cardholders can withdraw and deposit money, consult their accounts, and order cheque books. Retail outlets are equipped with 30,000 electronic points of sale (Epos) integrated into the system.

"We will take the banks to court for operating a cartel," said Mr Jorge Morgado of the Deco consumer association that led the call for a boycott. "They all plan to introduce the same charge at the same time without offering consumers any choice."

**'We want banks to be flooded with cheques as a result of the boycott to remind them of what a boon the Multibanco system has been to them'**

Mr Luis Cid, SIBS director, said it was natural that banks should seek to regain operational costs through a charge for a service that has been free since it was introduced in 1985. Three years ago British consultants estimated each Multibanco operation cost Es100, considerably less than the cost of processing a cheque.

The decision to levy a charge on card use comes as falling interest rates are sharply reducing earnings from loans and deposits and banks are seeking to improve their balance sheets through commissions and fee-based income. However, the use of cards has allowed banks to reduce staff levels. It has also improved services for customers, who until recently had to wait in long queues for the simplest of banking services.

"We want banks to be flooded with cheques as a result of the boycott to remind them of what a boon the Multibanco system has been to *them," said Mr Morgado. He* said Deco had been overwhelmed by messages of support and challenged a statement from SIBS that use of the Multibanco system yesterday was normal or even above average.

Paying for his lunch yesterday with cash instead of a card as usual, Mr Paulo Garcia, a computer engineer said: "The banks have enticed us into the Multibanco system over the past eight years by levying no charges. "Now they want us to pay. I support the boycott and will stop using my card for purchases altogether if they go ahead with the charge."

# Russia to raise tariffs on range of imports

By John Lloyd in Moscow

Pressure from Russia's powerful industrial and agricultural lobbies, coupled with fears of rapidly falling government income, have persuaded the government to bring in sweeping new import tariffs.

The tariffs, the subject of several decrees not yet published, are reported by the *Interfax news agency to* raise the average tariffs from 6-7 per cent to 15 per cent.

All imported food will be subject to a 15 per cent tax, while white sugar will carry a 20 per cent tariff and cigarettes a 30 per cent import tax. Tariffs on cars and perfume will also go up sharply: the changes will mean that foreign cars will carry a tax of between 40-60 per cent.

The move appears to mark a success for Mr Alexander Zaveryukha, the deputy premier with responsibility for agriculture, who had argued for a 25 per cent rise in white sugar prices to protect domestic producers. At the same time, however, tariffs on imported spare parts needed to re-tool industry have fallen to 5 per cent.

The other main reason for the increase in tariffs is the rapidly decline in government incomes, with the take from taxes running at little over half of what was expected. The shift to tax foodstuffs which are bought largely by the minority of wealthy Russians and the foreign community who buy at largely foreign-owned shops can be put through with a minimum of political pain.

At the same time, the choice of goods which are subject to the new tariffs shows that the government has not abandoned itself to wholesale protectionism, leaving large sectors unprotected and imposing on only a very few commodities - weapons, caviar, matches and concentrated alcohol – a 100 per cent tariff increase.

*Russia will not only cut grain imports to a minimum this year,* but intends to export 2m tonnes, the deputy agriculture minister, Mr Vladimir Shcherbak, told a government commission meeting, Reuter reports from Moscow.

RIA news agency quoted him as saying domestic supplies were sufficient to meet most demand, but there would still have to be some small imports of certain types of grain.

These should include 100,000 tonnes of corn seed, already covered by preliminary agreements and waiting in western ports to be delivered, Mr Shcherbak said. But foreign companies were seeking finance ministry payment guarantees before making shipments, and the agreements could still fall through, he said.

*Russia imported about 11m tonnes of grain in 1993, down from* 25m tonnes in the previous year.

Mr Shcherbak gave no details of the planned exports.

# Spanish workers prepare to fight Suzuki cutbacks

By Tom Burns in Madrid

The future of Suzuki's Spanish subsidiary remained in doubt yesterday after workers flatly refused to negotiate drastic job cuts demanded by the Japanese company.

Suzuki told union leaders it *intended to reduce the labour* force at its main plant in Linares by 70 per cent from 2,437 to 941. The company also plans to reduce production of the four-wheel drive vehicles that the factory produces by 50 per cent to 25,000 units this year and to impose a two-year wage freeze.

Earlier this week Suzuki said it would drop a threat to close *the plant if unions agreed to* job cuts. Santana, which is some 80 per cent owned by Suzuki, applied for receivership last month saying it had sustained accumulated losses of Pta21bn ($151m) in the past three years.

Union leaders said Suzuki had delivered a "take it or leave it" ultimatum which was completely unacceptable. They *said there was no point* in further talks and that they would now concentrate on mobilising the Linares area in southern Spain, where Santana represents the sole industrial activity and provides for more than 30,000 indirect jobs.

The anger in Linares has been fuelled by the failure by both Suzuki and the regional government to implement an agreement *signed last* year. Suzuki had agreed to wage increases of between 4-6 per cent and to raise output to 50,000 units a year, while the authorities had promised subsidies.

The Santana union leaders are understood to be preparing big demonstrations in Madrid at the weekend when the ruling Socialist party meets to *holds its national congress.* Yesterday, plant workers put up road blocks around Linares and temporarily occupied government offices in the nearby provincial capital of Jaen.

The future of Santana, which previously made Land Rover vehicles, has been in doubt since early last year.

The issue came to a head when the company filed for protection from creditors on February 18, provoking fierce public reaction in Linares and the surrounding region.

The strength of the Santana protest against the parent company Suzuki has created concern in the government about its possible impact on the climate for foreign investment in Spain.

The dispute has also generated political worries, with regional elections in Andalucia less than three months away.

EUROPEAN NEWS DIGEST

## French car sales drive pays off

Government measures to stimulate the French motor industry have prompted a strong response and should result in at least 150,000 extra car orders this year, Mr Gérard Longuet, the industry minister, said yesterday. The measures include a payment from the government of FFr5,000 (£572) for car owners who trade in vehicles more than ten years old to buy a new one, helping to prompt 54,000 extra orders in February compared with January, according to Mr Longuet. He forecast continued improvement and estimated that total car sales this year should exceed 1.9m, compared with 1.72m in 1993. The measures, which also include extra tax breaks for company fleets, have been matched by discounts from car producers. French manufacturers have benefited most, with Renault and Peugeot enjoying a stronger increase than the average 35 per cent. Mr Longuet said it was vital to revive car sales, which fell more than 18 per cent last year. Mr Longuet said that it was vital to revive the depressed car sector, which was severely hit by recession last year and contracted by more than 18 per cent. "The automobile sector is one of the principal motors of the economy and represents more than one million jobs" he said. "It is an ideal target to help stimulate consumption." *John Ridding, Paris.*

## Hedge fund row 'exaggerated'

The importance of hedge funds to the financial markets has been exaggerated in the recent debate over whether such funds should be regulated, according to Mr Edgar Meister, a member of the Bundesbank board. The main wish of the world's central bankers, including the Bundesbank, was for more transparency to observe more carefully the impact of the growing derivative business on the markets, specifically on market interest rates and on money supply, Mr Meister said. Hedge funds were only one of several powerful forces contributing to turbulence in the bond markets. There were also mutual funds, banks and brokers, Mr Meister said. Private investors should be calmed by the fact that the volatility in the capital markets was only temporary. Germany did not face big credit risks on account of hedge funds because the borrowing activity of such funds was regulated and limited in Germany, unlike in the US, Mr Meister said. *AP-DJ, Frankfurt*

## Mayor may lose immunity

The French National Assembly is to consider a judge's request to strip Lyons Mayor Michel Noir (left) of his parliamentary immunity for suspected embezzlement. The request from Judge Philippe Courroye was a further blow to the mayor of France's second city, once regarded as a possible presidential contender. Mr Courroye said he wanted to place Mr Noir under judicial control while he investigates suspicions the mayor used up to FFr7m (£800,000) in city funds for his own election campaign. *Reuter, Paris.*

## Krona to keep on floating

The Swedish krona is likely to float for an extended period and remain outside the European Union's Exchange Rate Mechanism, Mr Thomas Franzen, deputy governor of Sweden's central bank, said yesterday. "The lesson we have learned from developments in recent years is that we must first get the (Swedish) economy in order," he told a seminar in Stockholm. He predicted that European interest rates would continue to decline. "Monetary policy is unchanged in Europe despite the recent turbulence [in markets], which means continued successive interest rate cuts." *AP-DJ, Frankfurt.*

## Museum fee 'discriminatory'

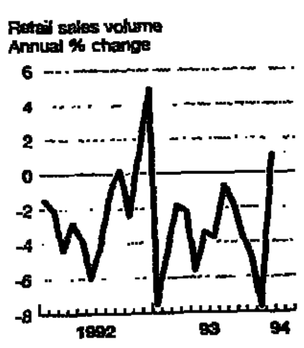
Spain should stop letting its citizens visit its museums free of charge because the practice of only charging tourists is discriminatory, the European Court of Justice ruled yesterday. Spaniards, foreigners living in Spain and holidaymakers under 21 can visit any state museum free of charge, but foreign tourists over 21 have to pay. The European Commission took the Spanish government to court arguing it was breaking European law by discriminating against people on the grounds of nationality. Charging foreigners effectively restricted their freedom of movement since museums were "one of the determining reasons" tourists were attracted to a country, the Commission said. Spain said it believed its open doors policy was not discriminatory since it included some nationals from other EU states. *Reuter, Luxembourg.*

ECONOMIC WATCH

## German retail sales edge up

**Western Germany**

Retail sales volume
Annual % change




Source: Datastream

Retail sales in western Germany were 2 per cent higher in January than in the same month last year. Sales in the whole of Germany were up 3 per cent, 2 per cent higher than in December. The increase was led by a 14 per cent year-on-year rise in sales of cars and components. Pharmaceuticals sales were up 11 per cent, and home furnishings 9 per cent. There was a 1 per cent drop in sales of food, drink and tobacco, and a 4 per cent fall in textiles, clothing and shoes. Overall economic activity in Germany "increased noticeably" around the turn of the year, the economics ministry said. The ministry cited growing foreign demand, "lively" housebuilding and "further clear progress" in eastern Germany's recovery as factors underlying this resurgence.

■ Russia's industrial output rose 2.3 per cent in February from January, but was 24.1 per cent below the level of a year earlier, the sharpest drop since start of reforms in 1992. Some 4,280 enterprises shut down some or all production last month.

■ Spanish industrial producer prices rose 1.1 per cent in January, compared with a 0.2 per cent rise in December and 0.8 per cent in January 1993. The monthly increase brings the rate for the year to 3.6 per cent in January.

# Çiller to pay at polls for cash crisis

**John Murray Brown** on the Turkish government's first political test after presiding over a sharp fall in the lira and a liquidity squeeze

Turkey's prime minister, Mrs Tansu Çiller must have told them their cheque was in the post. That at least is how one observer explains the gloomy faces of Turkish motorway contractors when they left a meeting with the prime minister still owed seven months in payments.

After less than a year in office, Mrs Çiller's conservative-led coalition is facing a desperate search for cash to meet its ongoing expenses.

It is a problem that will almost certainly affect the performance of Mrs Çiller's Truth Path party (DYP) in municipal elections across the country on March 27.

Turkey is in the middle of the most damaging financial crisis since the banking collapse of the early 1980s. After a decade of capital market reform, recent currency turbulence has underlined just how vulnerable the economy is to policy error.

With interest rates on government paper having risen to 125 per cent and the international bond markets for developing country debt suffering the jitters in the wake of the rise in US rates, Turkey is finding it increasingly costly to borrow. Privatisation receipts have not been as large as projected. Meanwhile, most of the tax changes recently introduced will not have an impact on revenues until 1995.

The government's problems deepened last week when it was forced to "pull" its $750m global bond issue. There are civil servants and public works contractors to pay, farm prices to subsidise, and debts to service, and bankers are worried a big liquidity crunch is on the way.

The road builders are just the latest creditors to come knocking on the government's door. The contractors had to settle for a package of tax relief and three-year bonds in lieu of the $700m owed for work completed. The work programme for 1994 has been sharply curtailed.

The government's response to the crisis and the run on the lira has been far from convincing. Sir Leon Brittan, the European trade commissioner, during a visit to Ankara last month, urged the Turkish authorities to introduce austerity measures to underpin the gains from the 12 per cent devaluation in January.

Instead Mrs Çiller set alarm bells ringing by suggesting Treasury bill liabilities should be converted into new five-year paper, in effect a domestic rescheduling.

What was puzzling was the Treasury's announcement that it is to issue convertible bonds in the state telecom company, even though the telecom company is still not privatised and all moves to prepare it for sale remain blocked by the courts. There were even press reports, quoting government officials, that undercover agents had been ordered to infiltrate the money markets in the belief that it was Kurdish separatists who were trying to destabilise them.

The crisis reflects the loss of local and international confidence in Mrs Çiller's leadership. The bold rhetoric that accompanied her appointment has never been matched by the reality of her policies. Her reformist instincts have been frequently blocked by opposition from her coalition partners, the Social Democratic Populists.

"Everyone has lost out," said one disillusioned Turkish businessman." The central bank's reputation has been damaged, so has the Treasury's. Reserves are depleted. And the small investor has got badly burnt."

Polls suggest that in the municipal elections on March 27 Mrs Çiller's DYP will limp in a poor fourth behind the Motherland party Anap, the main opposition party, the Social Democratic Populists, and the Islamic based Refah RP.

The election is the first real test of Mrs Çiller's popularity since she was voted party leader by the DYP congress last June.

A professional economist and a political outsider, Mrs Çiller seemed to offer the best hope of restoring the country's fortunes and forging its western identity. Today if Mrs Çiller survives the current turmoil, it will probably be less the result of any real political achievement than the fact that the DYP is unable to find a credible alternative leader.

### The currency turbulence has underlined just how vulnerable the economy is to policy error

Her policies, centred on finding ways to finance the budget rather than addressing the need to bring the deficit to heel, are attacked by leading economists. Her attempts at more structural changes, such as pushing through large-scale privatisation, tax reforms and curbing civil service pay rises, have been limited because of divisions in her coalition and have done little to ease budget pressures.

Also criticised has been her management style on which the resignations of two successive central bank governors have been blamed. What was seen as her mishandling of the 12 per cent devaluation in January badly dented the bank's prestige. Moreover central bank reserves have fallen by as much as $3bn since the beginning of the year to about $4.5bn early this month.

Some bankers say Mrs Çiller has in large part brought the troubles on herself. The local bond market has all but dried up as a direct result of her unorthodox and ultimately failed attempt to push down domestic bill rates. The current uncertainty has pushed rates on government paper up 30 points since the second half of 1993. Even at 125 per cent for one-year paper, there are few buyers. As one banker put it: "It's no longer enough to have an interest rate policy. Something more is needed."

After 7 per cent growth in 1993, forecasts for this year are being marked down. One western economist says Turkey could see negative growth in 1994, making it even more difficult for business to rebuild.

In such a climate, said one economist, bankruptcies would be unavoidable, particularly for those dependent on government payments, such as contractors. Banks too, will feel the pinch, caught out with large foreign exchange exposure at a time when the lira's depreciation is accelerating.

Today Turkey displays all the symptoms of an economy where inflation is heading out of control. No one wants to hold lira. On pay day, Turkish civil servants rush to the exchange shops. Even divorces are sometimes settled in hard currency.

Some foreign banks worry the lira could fall even more sharply unless a serious structural reform programme is introduced. Few Turkish observers hold out much hope of that in the current political uncertainty.

Çiller: once seemed to offer the best hope of restoring the country's fortunes and forging its western identity

# Journalists strike in pensions protest

By Robert Graham in Rome

Italian journalists yesterday began a four-day strike in protest over plans by the Ciampi government to place some of the surplus in the journalists' pension fund in the main state-operated pensions scheme.

The strike provoked dismay among political parties who have been relying on the media for coverage in the final 11 days of the general election campaign.

The stoppage will affect all newspapers today and Thursday, and television and radio on the following two days.

The stoppage is the result of a long-running battle between the journalists union and the government over the pension fund. As part of an effort to boost the fast depleting coffers of the state-operated pension scheme, the Ciampi governmment decided last year to raid the surpluses of separately operated, but state-run entities, controlling the pensions of the various professions.

The strike comes as Italian journalists have for the first time come under investigation for corruption. Three prominent economic writers are being investigated by Milan magistrates for allegedly receiving money from the Ferruzzi-Montedison group.

The investigations follow revelations by Mr Carlo Sama, the former managing director of Ferruzzi-Montedison who has admitted large-scale illicit funding of poltiical parties.

Mr Sama said he had submitted to Milan magistrates the names of several journalists who had been paid sums of money to help improve Ferruzzi-Montedison's image.

The journalists deny the allegations. They are Mr Giuseppe Turani, of La Repubblica, Mr Osvaldo De Paolini, former City editor of the business daily Sole-24 Ore, and Mr Ugo Bertone of La Stampa.

Italian journalism has claimed much credit for exposing the corrupt links between business and politics.

# Japan trade surplus with US declines

By Paul Abrahams in Tokyo

Japan's trade surplus with the US fell for the first time in nine months in February, the ministry of finance said yesterday.

The slight drop in the surplus will help reduce tension with the US. But Washington will need further and more substantial falls over an extended period before it is convinced the problem has been solved.

The surplus with the US was $4.344bn (£2.9bn) in February, a fall of 0.9 per cent compared with the same month last year. Imports from the US rose 15.1 per cent, while exports grew by 6.8 per cent.

Car sales in the US were down sharply, hindered by the strong yen, but exports of semiconductors continued to rise. Imports of US computers, food and machinery surged in February, as did aircraft deliveries.

Analysts said the level of the surplus with the US, which was below expectations, would help support the dollar against the yen.

Japan's overall trade surplus was up 3.3 per cent in February compared with the same month last year, reaching a record $10.912bn, although the increase was lower than that in previous months. In December and January, the surplus rose 15.5 per cent and 17 per cent respectively. In yen terms, the surplus, which had risen in January, dropped 9.1 per cent to Y1,186bn.

Japanese exports rose 5.6 per cent to $29.532bn, while imports grew 7 per cent to $18.62bn. Imports of food, including foreign rice, were up 20.3 per cent year on year.

The growing importance of Japan's trade with other Asian countries was underlined by a 2.6 per cent increase in exports to Asean nations and a 0.7 per cent rise in imports. Exports to China were up 0.8 per cent while imports rose 3.6 per cent.

The markets were surprised by a rise in domestic machinery orders placed by the private sector during January. These orders represent a leading indicator of capital investment intentions. A fall of about 6 per cent had been expected, but they increased 1.9 per cent against the previous month, data released by the Economic Planning Agency showed.

# Kantor says ties with Tokyo in serious disrepair

By Nancy Dunne in Washington and Michiyo Nakamoto in Tokyo

US-Japanese trade and *economic relations are "in serious disrepair,"* Mr Mickey Kantor, the US trade representative, said yesterday.

Japan must take "its full share of responsibility in promoting global economic growth," he told the House trade subcommittee. It had not yet done that in bilateral talks with the US or in the Uruguay Round.

Mr Kantor, who has pursued a tough line in efforts to encourage Japan to produce a market-opening package containing "numerical indicators of progress," won warm support for his stance from both Republicans and Democrats on the committee.

"Unless or until Japan is prepared to take their share of responsibility we're not going *to resolve these problems."*

The US, he said, had been "somewhat victimised" with the characterisation that it was proposing managed trade solutions. "The Japanese have practised managed trade for years," he said. "We're trying to unmanage trade in Japan."

Meanwhile it emerged in Tokyo that the US has presented Japan with detailed proposals for measures to promote deregulation and market access.

The proposals, contained in a discussion paper, were delivered to Japanese officials in January during the framework negotiations and cover 45 specific areas where the US would like improved foreign access to Japan's markets.

The Japanese government *has resisted demands made* by the US under the framework negotiations to set specific objective criteria in opening up its markets. Instead, it has hoped to deflect criticism over its huge trade surplus by taking the initiative in compiling the deregulation plan.

The US proposals include steps in four broad areas covering competition policy, administrative transparency, deregulation and distribution.

In competition policy, the US is calling for the abolition of exclusionary business practices, active application of criminal charges under the anti-monopoly law and substantial relaxation of rules governing transport, airline, shipping and trucking fees.

In administrative transparency, *the US wants more foreign* participation in government advisory groups, while in deregulation it seeks establishment of an independent organisation to supervise progress in deregulating the markets.

In distribution, the US is asking for infrastructural investment to improve rail and road access to Japanese ports and airports, more warehouse space for imports at Narita Airport, introduction of computer systems to handle import matters before goods arrive in Japan and increased handling of foreign products by small-scale retailers.

## George Graham, David Goodhart and Stephanie Flanders report from Detroit

# Flexible harmony marks G7 jobs talks

Labour and finance ministers from the Group of Seven leading industrial nations yesterday wound up two days of discussions in Detroit about unemployment and job creation in a warm glow of apparent harmony.

"It seemed to me that there was a new conventional wisdom emerging about the whole question of unemployment," said Mr Padraig Flynn, the European commissioner for social affairs.

Ministers emerged from their meetings to say they were in broad agreement on the need for macroeconomic policies that promote sustainable growth with low inflation, but also that they shared a problem of structural unemployment that would not be solved by growth alone.

"Everyone agrees it's both structural and cyclical," said Mr Paul Martin, Canada's finance minister.

At the same time, everyone agreed on the role of small business as an engine of job creation, the need to improve education and vocational training and the importance of offering the long-term unemployed a way to re-enter the workforce.

With considerably less unanimity, *the participants also spoke approvingly of labour market flexibility.*

Even when they used the same words, however, different ministers brought different underlying meanings to them, reflecting both national and functional divergences.

Besides occasional national splits – "the Anglos against the rest", as one Italian official put it – some delegations showed internal differences both between the different political parties in their coalition governments and between the different outlooks of labour and finance ministers.

"I've got a sense of cultural gulfs in other delegations," said Mr Kenneth Clarke, the UK chancellor of the exchequer.

On macroeconomic policy, the usual topic of G7 meetings, the Detroit conference showed some of the customary disagreements.

The US argues that a considerable portion of the G7's current high unemployment rates, particularly in Europe, must be attributed to the recession, and therefore requires efforts to boost demand-led growth – by interest rate cuts in Europe and by fiscal stimulus in Japan.

Japanese and European officials *coolly noted the US argument, which* Mr Edmond Alphandéry, France's economy minister, said had become "quite standard". He noted that although continental Europe had higher *unemployment because it was* at an earlier point in the recovery cycle, it was emerging faster and with less pain than the UK and US had done.

> 'We'll be able to say . . . we all have the same problems' – Bill Clinton

Ms Laura Tyson, the chief White House economic adviser, insisted at the opening that she would not accept the argument that structural policies could replace cyclical *policies as a* recipe for dealing with unemployment.

US officials had expected something of a row with the UK on this issue, but other participants said that the argument quickly fizzled *out when no-one disagreed.*

"We have never said that structural adjustments could replace a good macroeconomic framework," said Mr Henning Christophersen, vice president *of the European Commission.*

On the issue of labour market flexibility, the division became clearer. "Some seem to define flexibility as the freedom to fire workers and lower *wages," complained Mr Robert Reich,* the US labour secretary, calling for more worker empowerment and training to help mobility.

Mr Clarke, the implicit target of Mr *Reich's jibe, denied any substantial* rift between the UK and the US.

"The Americans in their presentations put less emphasis on labour market flexibility than we do but the *reason is that they already have a* deregulated labour market," Mr Clarke said.

While ministers agreed on the need to reduce the cost of labour to employers, *they differed on the extent* to which this reduction should come from the wage packets of their workers.

Canada and France urged an attack on payroll taxes, which Mr Martin described as "a cancer on job creation", as well as a weeding out of social security programmes that can harm job creation.

"We feel we can eliminate part of the social support system which is a disincentive to work and keep the basics," Mr Martin said.

All sides drew a sigh of relief, however, at the complete absence of support for ideas such as protectionism *or a shorter working week.*

"The idea of a generalised reduction of the working week was raised by no-one. No-one proposed closing their frontiers to fight unemployment. No-*one said we should tackle unemploy*ment by slowing the rate of technological progress. The most tangible thing to come out of it was the refusal to simplify the problem," said Mr *Alphandéry.*

In their efforts to resist populist demands such as protectionism, G7 countries hope that the Detroit gathering will provide them with useful *political cover at home.*

"We'll be able to say, see – the Germans and the French and the Canadians and the Italians and the Japanese – well, we all have the same problems," *concluded President Bill* Clinton.

MAN IN A HURRY: President Bill Clinton is pressing hard for Group of Seven action over jobs *Reuter*

# Small business role in job creation questioned

By George Graham

Small businesses have for years commanded the profound obeisance of politicians and economists as the most *fertile source of new jobs, and* ministers gathered in Detroit this week continued to pay homage.

But economists working under the aegis of the US Commerce Department's Census Bureau have taken a swipe at the idea that small businesses create more jobs than larger ones, in a new study examining the performance of manufacturing industry from 1972 to 1988.

Economists Steven Davis, John Haltiwanger and Scott Schuh found that although smaller companies created new jobs at a much faster rate than *did larger employers, they also* destroyed jobs much more quickly.

Companies with fewer than 20 employees added an average of 16.5 per cent to their workforces each year, the study showed, but they also destroyed an average of 18.8 *per cent of their jobs.*

At the same time, companies with more than 50,000 employees created new jobs averaging 6.3 per cent of their total workforces each year and destroyed 8 per cent on average.

"In a nutshell, net job creation behaviour in the US manufacturing sector exhibits no strong or simple relationship to employer size," the study says.

The Census Bureau economists also note that newly created jobs at small manufacturing plants are much less likely to survive than new jobs at large plants.

*They complain of fallacious* statistical presentations of the data on job creation, suggesting that if a company drops in size below the cut-off point for small businesses it can seem to increase employment in the small business sector, even if it really represents a loss of jobs.

Since large companies account for most of manufacturing employment, they also account for most of job creation and destruction. Small businesses, the study shows, account for less than one fifth of job creation.

But from Mr Kenneth *Clarke, Britain's chancellor of* the exchequer, to Mr Paul Martin, Canadian finance minister, delegates in Detroit this week hailed small businesses as the engine of job creation.

"There's an enormous amount of creative destruction in small business. I think *there's job loss in small* business but there's also a lot of job creation," Mr Martin said.

# Pressure for social clause in Gatt deal

By George Graham in Detroit

*France and Italy are leading a* drive to include restrictions on child labour and forced prison labour in next month's final round of negotiations on the Uruguay Round of trade liberalisation talks.

Mr Edmond Alphandéry, France's economy minister, urged this week's Group of Seven jobs conference in Detroit to press for "a minimum of rules applied at the international level".

Italy strongly backed the French initiative, and both Canada and Greece, which attended the Detroit meeting as current president of the European Union, also expressed interest in some form of social clause to the Gatt agreement.

French officials also expect partial support from the US, which introduced similar protections in its North American Free Trade Agreement with Canada and Mexico, and has been pressing similar demands in its talks with China about the extension of Most Favoured Nation trading privileges.

"I am well aware that the social clause is far from receiving unanimity," said Mr Michel Giraud, France's labour minister.

International trade union organisations have been pressing for a broader social clause covering work safety standards, union rights and protection against discrimination in the workplace.

But other G7 countries are reluctant to reopen the Gatt deal at this stage, and trade experts say it is extremely unlikely that a social clause could be inserted in the face of strong opposition from many Asian countries.

# High pay for the few in a city out of work

By David Goodhart

Just five miles down the road from the jobs summit conference centre in Detroit the brand new Jefferson North Chrysler car plant is a standing affront to much of the G7 debate about job *creation. The highly* automated plant, which produces the Grand Cherokee jeep, is one of the success stories of the town's *revitalised car industry.*

None of the jobs summit delegates would object to the 200 robots or the automated paint spraying and welding at the plant, which reduces the number of employees to about 3,000. But the policymakers would not approve of the fact that, in a town where unemployment is double the national average at 13 per cent, so much employment is hogged by the securely employed "insiders".

Average weekly working hours at the two-shift plants are 55 to 60 hours, with average annual take-home pay of more than $50,000 (£34,246). Most employees work from 6am to 3.30pm, plus three Saturdays in four.

*Chrysler and the United* Auto Workers union collude to maximise work and income for those already in a job, and until recently most new *recruits were relatives of* existing employees. Yet Detroit has lost 250,000 auto-related jobs in the past 10 years and there are 23,000 people on the books of the state employment agency who want to work at Jefferson North. A few hundred of them may be lucky if the plant decides to put in the third shift. Anybody who gets a job will find a plant with harmonious working relationships and strong powers for organised labour. The UAW not only has a closed shop, it also has equal representation on the key committees which decide most of what goes on.

Mr Charles Matthews, a semi-skilled assembly line *operator, who has worked for* Chrysler for 30 years, said: "The hours are long but this is the best plant I've ever worked in." He retires in two *months, aged 55.*

Unlike some other US car makers Chrysler took on existing workers when the new plant opened up, which meant an average age of over 50. There were big retraining programmes for technicians but training in general seems less important than many summit delegates assume.

One Chrysler supervisor admitted that many of the semi-skilled jobs take only about half an hour to learn. There is no job rotation for those on repetitive tasks but most workers are part of a small team and training for less skilled workers concentrates on building up team-working skills.

Jefferson North would make *only a small dent in Detroit's* unemployment problem even if it was maximising rather than minimising employment opportunities. Although the *town's prospects are* improving, and it has a dynamic mayor in Mr Dennis Archer, the Clinton administration has exposed its unemployment sores to the world by staging the job summit here.

Indeed, Detroit illustrates that despite the good US job creation record, its unemployment record is less good than the national rate of 6.8 per cent makes it appear. Mr Robert Reich, labour secretary, told a summit briefing that the US figures failed to pick up many people who have dropped out of the labour market altogether. He said that "adult male non-employment" was close to 12 per cent in the US. "That is not all that different from Europe," he said.

But in Detroit, a predominantly black city, even standard unemployment figures are high, although it is difficult to be precise because of difficulties in defining where the town ends.

*In central Detroit the* unemployment rate climbs to 17 per cent and blacks aged 16 to 19 have an unemployment rate of 41 per cent. *Sobering statistics for* those Europeans who thought the American labour market had all the answers.

# Ministry to probe construction groups

The US has informed Japan it is considering claiming damages against Japanese construction companies which allegedly fixed contracts to build a US navy base in Japan, government officials acknowledged yesterday, writes Michiyo Nakamoto.

Mr Kozo Igarashi, minister of construction, said the ministry will investigate US allegations that 73 Japanese contractors conspired to fix contracts to build the US navy's Atsugi Base between 1984 and 1990 and charged inflated prices for their work.

The US has informed Japan's foreign affairs ministry that it is preparing to seek damages of Y1.1bn ($10.4m) against the Japanese contractors, Mr Igarashi said yesterday. "As the ministry which oversees and instructs the industry, we will look into the matter and deal with it appropriately," the minister said.

The US move comes at a delicate time in US-Japan relations and as the Japanese government has been considering strengthening its competition policy as part of its market opening measures.

# US nuclear test ban extended

President Clinton has told Congress that he is extending the US moratorium on nuclear testing until September 1995, the White House said yesterday, Reuter reports.

White House spokeswoman Dee Dee Myers said the decision was based in part on the restraint of other declared nuclear powers in not resuming testing in response to China's test last October. She also credited the encouraging progress in comprehensive test ban talks since they opened in January.

## Clintons try to divert attention away from the Whitewater affair

# Seeking solace in a friendly crowd

By Nancy Dunne in Washington

President Bill Clinton began a campaign-style swing through New Hampshire yesterday, vowing to keep his eye on domestic policies despite attacks from "people who are giving me hell in Washington."

Mrs Hillary Clinton also continued administration attempts to divert attention from the Whitewater affair, stemming from the Clinton's financial dealings in Arkansas in the 1980s, over which they have come under heavy fire from Republicans in Washington.

Mrs Clinton was due to address a rally in St. Louis on the second day of a trip promoting the administration's healthcare reform plan.

On Monday night the President launched an impassioned attack on his Republican critics and made a plea for a nationwide debate over what he called the issues of concern to Americans.

"This overriding negative, intensely personal, totally political devoid-of-principles attack is not good for the country," he said. "It is inconsistent with the tradition of Abraham Lincoln and Teddy Roosevelt."

He described himself as "an old-fashioned" man, who believes in the contest between good and bad and that good wins out.

"We have to appeal to what is good in this country," he said. "We have to ask people to face hard truth and debate hard issues and come together and think new thoughts about problems that we are frankly not solving today."

Mr Clinton appeared yesterday morning at a gathering of citizens in the small New Hampshire town of Nashua, where he got heavy support in his campaign for president.

In the friendly New Hampshire crowd, he found at least one who agreed with his attempt to refocus the national debate.

"I'm 68 years old," one woman told him. "Whitewater is for canoeing and rafting. Shame on those who would detract and distract from the important work you're doing with universal health coverage and jobs."

"Thank you...bless you," Mr Clinton said.

# Mexican financier kidnapped

By Ted Bardacke in Mexico City

The head of Mexico's largest financial group has disappeared in what police are treating as a kidnapping.

Eyewitnesses said Mr Alfredo Harp Helu, president of Banamex-Accival, was intercepted by a group of armed men on Monday morning as he was being driven to work in central Mexico City.

The kidnappers have yet to make public their demands but have been in contact with the Harp family, according to the police.

When news of Mr Harp's disappearance reached the Mexico City stock market, Banacci B shares fell sharply, closing on Monday down 3.86 per cent on very heavy volume. Shares continued to slide yesterday.

The New York security company Kroll Associates is believed to have been brought in to handle the case. It won the release of two businessmen kidnapped in 1992.

Professional kidnappers have been targeting Mexican businessmen with increasing frequency with over 2,000 kidnappings reported in the past five years.



## LEGAL NOTICES

NOTICE TO CREDITORS TO SEND CLAIMS

PHONEPOINT LIMITED

(IN LIQUIDATION)

NOTICE IS HEREBY GIVEN that the creditors of the above named company are required on or before 11 May 1994 to send in writing their names and addresses and the particulars of their debts or claims, and the names and addresses of their solicitors, if any, to Timothy Richard Harris of Coopers & Lybrand, St Andrew's House, 20 St Andrew Street, London EC4A 3AY, the Joint Liquidator of the said company, and, if so required by notice in writing from the said Joint Liquidator, or by their solicitors, or personally, to come in and prove their said debts or claims at such time and place as shall be specified in such notice, or in default thereof they will be excluded from the benefit of any distribution made before such debts are proved.

All known creditors have been or will be paid in full.

DATED 11 March 1994

Joint Liquidator

# Deloitte to pay $312m

By Patrick Harverson in New York

Deloitte & Touche has agreed to pay $312m (£209m) to settle a string of government charges that the big US accountancy *firm failed properly to audit* several banks and savings and loan institutions which collapsed in the 1980s.

Yesterday's settlement resolved 15 lawsuits brought against Deloitte by various government agencies seeking $1.8bn in damages.

The lawsuits charged Deloitte with professional negligence, claiming that the firm issued clean audits for institutions that later proved to be insolvent.

The settlement is the second *largest paid by a professional* firm involved in the S&L and bank failures.

In 1992 accountancy firm Ernst & Young paid $400m after reaching a similar accord with federal authorities.

Although analysts believe that a large part of the $312m settlement would be paid by Deloitte's insurers, the firm's partners are expected to contribute toward the cost of the agreement.

However, Mr Michael Cook, Deloitte's chief executive, described the settlement as a "business necessity" and "fair."

The Deloitte settlement is not likely to be the last of its kind in the long-running S&L and banking affair and further settlements are expected.

# Colombian army 'caused deaths'

Amnesty International, the London-based human rights organisation, yesterday accused the Colombian armed forces and related paramilitary groups of responsibility for most of the 20,000 political killings in the country since 1985, writes Stephen Fidler.

Amnesty said governments had escaped international criticism in part by hiding behind a public relations smokescreen, which portrayed a "myth" that drug traffickers and guerrillas were mainly to blame.

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# Settlers ready to be martyrs or heroes

## Hebron Jews could spark war, writes **Julian Ozanne**

A photograph of Rabbi Meir Kehane, the slain Jewish racist who advocated religiously sanctified Jewish violence against Arabs, is proudly displayed in the bedroom of a 13-year-old boy in Hebron, the city that has become a flashpoint of Israeli-Palestinian violence.

"I don't agree with Kehane but when a boy grows up and his father is stoned and his friend's father is murdered by Arabs, you must understand why he might see Kehane as a hero," says the boy's mother, Mrs Ruth Hizmy.

Rising Jewish settler militancy has become the greatest political threat to the government of Mr Yitzhak Rabin and the Israeli-Palestinian peace process. At the least, the settlers promise a nationwide campaign of civil disobedience to resist evacuation from Palestinian areas. At worst, rising emotions, fears and Jewish religious fundamentalism could explode into a Jewish-Arab civil war and even Jewish-on-Jewish violence.

The 40 Jewish families settled in Hebron are in the vanguard of Jewish militancy. Hebron is the breeding ground of the two Jewish terrorist groups, Kach and Kehane Lives, banned by the government this week.

The Hebron massacre has worsened the settlers' tendency to be an insular community sustained by the belief they are on a mission from God to maintain a Jewish presence amid the 110,000 Arabs who live in Hebron, burial place of the biblical patriarchs Abraham and Jacob, and an area sacred to both Moslem and Jew.

Rabbi Moshe Lavinger, founding father of the Jewish settlement movement in the occupied lands, sits facing a charge of ignoring army orders, in Jerusalem yesterday

They refuse to see Hebron as occupied. For them it is an intrinsic part of the land of Israel promised to the Jews by God. Part of their cultism is reflected in their deep belief they are being victimised, not only by the Arabs but by their "treacherous" Jewish government. They believe all outsiders do not understand them and are part of a conspiracy to defeat their religious goals.

Like all messianic cults, they have martyrs and heroes and a powerful faith in the sanctity of dying for one's beliefs. They strongly believe in expanding their numbers by breeding; the average family has six children, and talking to the children is like talking to the brainwashed.

Mrs Shani Horowitz, originally from New York, moved to Hebron because she wanted to live somewhere "where by just sitting I was doing something for the Jewish people."

In passionate and often angry tones, she says the Hebron settlers are like the early Jewish pioneers who built the state of Israel through settlement. "Hebron is spiritually and geographically the centre of Jewish life. Because we live here, Jews can come and visit the sites and holy places. We are the messengers. We are sitting here for the rest of the country.

"Evacuating Hebron is like evacuating the Wailing Wall. Hebron is the second most important Jewish city after Jerusalem. We are very much on the front line, on a mission as soldiers. We are holding on tight to the land of Israel. We are redeeming this place from being barren of Jews."

The government's timid moves against the settlers has exposed the weakness of Mr Rabin's political will. He fears that acting against the Hebron settlers will fuel right-wing opposition to the peace process and force the government into surrendering a powerful pawn in the drawn-out negotiation with the Palestinians.

But the government's refusal clearly to state the long-term line of its withdrawal from occupied Arab land has bound all 125,000 settlers together in common cause with the Hebron settlers. The belief is that any move against Hebron is the thin edge of the wedge. Most of the cabinet realise that Hebron and some other settlements will have to be evacuated sooner or later; the more the government delays, the more strongly organised the settlers become.

Yesterday, hours before an anti-government demonstration, the Yesha council of Jewish settlements said: "It is inconceivable that a Jewish government could make Hebron *Judenrein* (clean of Jews)...The Rabin government has no mandate for an 'ethnic cleansing' of Hebron or to carry out its policies of capitulation [to the PLO]."

The settlers are preparing a campaign of fierce civil disobedience against any effort to evacuate them. They have urged the army to disobey orders, and implicitly threaten violence. "If the government tries to evacuate Hebron it will be a declaration of war against the Jewish people," said Mr Noam Arnon, a Hebron settler. "We are not going to move. We are not going alive. They will have kill us."

Mr Arnon says settler leaders are calling for non-violence because they know that violence damages their cause. But he warns that if the army leaves, Hebron settlers will take up arms against the Arabs in a civil war. Jewish law has a strong prohibition against Jewish-on-Jewish violence, but Mr Arnon says that if the army tried to evacuate Hebron by force, "with deep emotional and religious feeling, people might lose self-control. Then, horrible, terrible things might happen."

With up to 15,000 army-issued automatic weapons in the settlers' hands, ten of thousands of licensed handguns and the possibility of secret arms caches, these are threats the government cannot take lightly. But the more the government delays a political decision on settlements, the more the settlers threaten the fragile peace process, and the stability of the government itself.

Members of the Boerekommando, an extreme right-wing organisation, preparing sandbags as they build defences at the Wonderboom fort, north of Pretoria yesterday. About 30 of the right-wingers occupied the fort that overlooks the South African administrative capital and have vowed to fight to keep it. *Associated Press*

# Strike hits S Africa gold mine for second day

**By Matthew Curtin in Johannesburg**

A strike over free political activity halted underground work at the Kloof mine, one of South Africa's most profitable gold producers, for the second day running yesterday. Kloof is responsible for about 5 per cent of the country's gold output of 620 tonnes a year.

The strike, by 11,000 of the mine's 16,000 workforce, is the biggest in the sector since 1991. It comes in the middle of a campaign by the National Union of Mineworkers to win concessions from Gold Fields, Kloof's parent company.

An NUM official said workers had given a list of grievances, including an alleged ban on political activity on mine property. The union had not received a response and this had led to the strike. A Gold Fields official said the management had responded.

Gold Fields has before now declined to take part in the industry's wage bargaining forum, unlike the rival mining houses Anglo American, Gencor, Johannesburg Consolidated Investment and Randgold.

# Honesty urged over failure in Africa

**By Michael Holman, Africa Editor**

A leading British charity yesterday called for "an open acknowledgment of the scale of sub-Saharan Africa's development failure".

In a strongly-worded attack on the World Bank's latest report on the region, Oxfam said that bank-supported structural adjustment programmes had failed to "generate sustainable growth and significantly reduce poverty".

The charity, which is heavily involved in Africa, declared that adjustment programmes "were preoccupied with lowering inflation through interest rates and unrealistic money supply targets.

"Poorly planned and sequenced import liberalisation measures" had "exposed potentially competitive local industries to ruinous competition from imports" Oxfam said in its statement.

The British charity accused the bank of "complacency" in the face of what it called Africa's "deepening development crisis".

The charity also attacked the bank's classification in its report of Zimbabwe as a successful adjusting country as "bordering on outright deception".

Zimbabwe's adjustment programme did not come until operation until 1991, says Oxfam: "Since when there has been no sign of recovery in investment or export growth".

# IAEA 'was blocked in N Korea'

The International Atomic Energy Agency (IAEA) team inspecting nuclear facilities in North Korea has been obstructed in its work, the organisation said yesterday, Patrick Blum reports from Vienna. "Restrictions were applied, stopping us making some tests," the IAEA said.

The team which spent 15 days in North Korea was able to visit all seven declared nuclear facilities as agreed with Pyongyang last month. One of the plants where the experts faced curbs was at the main nuclear complex at Yongbyon, north of the capital. The team will report back this morning. A formal IAEA board meeting could be called next week.

## CFA zone plea

Leaders of seven former French West African colonies gathered yesterday to lobby for more foreign help to cope with a 50 per cent devaluation of their common currency, the CFA franc, Reuter reports from Ouagadougou.

International Monetary Fund officials were present to hear the plea. The IMF is rushing through soft-loan agreements to help CFA countries get relief from international creditors.

## Death for fraud

The mastermind of one of China's largest fraud schemes has been sentenced to death and a former vice-minister jailed for 20 years for corruption in the case, it was revealed yesterday, Reuter reports from Beijing.

Shen Taifu was sentenced on March 4 for organising the Great Wall Machinery and Electronics Group, a pyramid-style scam that sucked up Yuan 1bn ($114m) from unsuspecting small investors.



# Mahathir likely to gain control of Sabah assembly

**By Kieran Cooke in Kota Kinabalu, East Malaysia**

The national front coalition government in Malaysia led by Prime Minister Mahathir Mohamad appears likely to assume power in the state of Sabah, East Malaysia, after several members of the dominant local political party voiced support for Dr Mahathir.

Sabah is one of only two states in the Malaysian federation not controlled by parties in Dr Mahathir's national front. In bitterly fought state elections last month the locally constituted Parti Bersatu Sabah (PBS), led by Mr Joseph Pairin Kitingan, the chief minister, narrowly defeated the national front and retained its control of the Sabah assembly.

But in recent days PBS's majority has been threatened by a number of defections by its assembly members to the national front. Yesterday Mr Jeffrey Kitingan, a younger brother of the chief minister who was elected as a PBS assemblyman in last month's elections, announced he was forming a political party which would join Dr Mahathir's national front coalition.

Mr Jeffrey Kitingan, who was recently released after being detained for three years on suspicion of wanting to take Sabah out of the Malaysian federation, has said that Sabah could progress and develop through membership of the national front.

Dr Mahathir has made no secret of his antagonism to the PBS and to Mr Pairin Kitingan in particular. The PBS accuses Dr Mahathir of withholding federal funding for Sabah's development and says the national front has paid millions of dollars to win support of PBS assembly members.

The national front now seems certain to command a majority in the state assembly, which is due to hold its first meeting on Friday since the recent election. Earlier this week Mr Pairin Kitingan asked the Sabah governor to dissolve the assembly and for new elections to be held.

NEWS: WORLD TRADE

# Gatt members warm to China's entry

By Frances Williams in Geneva

Members of the General Agreement on Tariffs and Trade, with the notable exception of the US, yesterday expressed strong support for an early resumption of China's Gatt membership and welcomed recent moves to liberalise trade and relax foreign exchange controls.

However, the row between the US and China over human rights, which could lead to non-renewal of China's most-favoured-nation trading status in the US market, is proving a big stumbling block to faster progress in the negotiations on Gatt entry terms.

China is anxious to rejoin Gatt by the end of this year, so that it can become a founder member of the World Trade Organisation which succeeds Gatt in 1995.

Entry negotiations resumed yesterday after a six-month gap, allowing Chinese officials to present details of Beijing's latest foreign exchange and trade reforms. These included the unification of exchange rates and a managed float of the Chinese currency since January this year, with a pledge of full convertibility by the year 2000, as well as tax reform and reductions in a wide range of tariff and non-tariff barriers.

The response yesterday was generally favourable. The European Union said the reforms appeared to be going in the right direction, and it and Japan expressed hopes for an acceleration of the negotiations. However, the US said it was not prepared to subscribe to "an artificial deadline" for Chinese membership.

At the same time, western nations are united in pressing China to pay a still higher Gatt entry fee, including lower barriers to trade in industrial goods and agriculture, improved market access for foreign services companies such as banks, and better protection of intellectual property rights. Gatt members are also seeking further moves by Beijing to cut state intervention in the economy and ensure trade rules are applied consistently across the country.

China was an original member of Gatt but pulled out in 1950 after the Communists came to power. The Beijing government applied to re-enter Gatt in 1986 and has taken a full part in the Uruguay Round of global trade talks. However, progress in the membership talks, which began in 1987, has been slowed by human rights concerns as well as the difficulty of getting to grips with China's rapidly-evolving trade regime.

# Beijing and the business of human rights

## Nancy Dunne on US company fears of losing their fastest growing market

When Mr Warren Christopher, the US secretary of state, confronted Chinese officials in Beijing at the weekend on the vexed issue of human rights and trading rights, it was the American who blinked first.

Since last June the administration of President Bill Clinton has vowed to annul China's Most Favoured Nation trade status unless it improved its human rights record. However, in spite of compromising noises made by Mr Christopher as he left Beijing on Monday, China has not only failed to make any "significant" progress to which the secretary of state could point, it has yet even to offer political cover for what appears to be a US retreat.

China has had dangled before it the possibility of permanent MFN status but has remained insistent that the human rights of its citizens is its own business. Its officials are of the view that the US needs China as much as China needs the US. They might be right.

US companies have committed or invested $10bn (£6.8bn) in China. It is their fastest growing export market, according to Ms Pam Baldinger, communications director of the Business Coalition for US-China trade. The group of 1,000 companies warns that loss of China's MFN status, and subsequent reprisals, would put all the investment at risk.

American exports to China soared by 19 per cent in 1992 and 17 per cent last year. Most of the market is in sophisticated technology, capital equipment and aerospace, industries which provide the high wage jobs Mr Clinton has promised to increase.

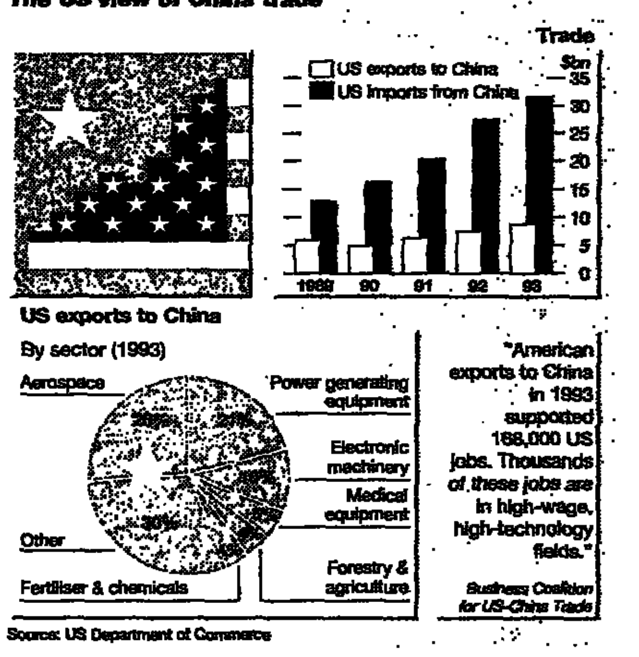
More than anything, it is China's potential that draws hungry companies in droves. According to the Business Coalition, the potential market looks like this: $40bn over the next 20 years for aerospace; $90bn over the next seven years for power generation equipment; $29bn over five years for telecommunications; $18.2bn over three years for oil-field and gas machinery and $4.3bn over the next eight years for computers.

Withdrawal of MFN would make a gift of these markets to European and Japanese competitors. It would also cost US consumers an estimated $16bn they save buying cheap Chinese goods.

"Loss of MFN would poison the trade environment," said Mr Bill Lane of Caterpillar, which had a 20 per cent surge in sales of construction and mining equipment to China last year. With Japanese suppliers still in the lead, "it's critical that MFN be renewed", he said.

American Telephone and Telegraph has been making deep inroads in China. Mr Randolph Lumb, government relations vice president for AT&T, said the company can generate $6-$8 through trade with its China subsidiaries for every $1 invested there.

The US view of China trade




Source: US Department of Commerce

Christopher: unrequited compromising noises

In Guangdong province, the company has beaten formidable competition from entrenched companies such as Alcatel, the French telecoms equipment maker, and Ericsson, the Swedish group, to win big switching and transmission contracts. Its joint venture in Shanghai is the leading supplier of telecom transmission equipment in the country.

Sales of switching and transmission systems are rising. AT&T Network Systems has fibre optic and transmission joint ventures in China with switching and microelectronic ventures under negotiation. AT&T Bell Laboratories is working with the Chinese government to set up a research and development operation in the country.

China also offers hope for the US commercial aircraft sector, which has been hit hard by competition from the European Airbus consortium and by recession abroad. McDonnell Douglas has been in China since 1975 selling aircraft and producing components.

"It took 10 years to get that project off the ground," said Mr Mark Schlansky, a McDonnell Douglas spokesman. "It required a great deal of patience. Trust had to be built on both sides. Progress had to be incremental. Now we've learned their values, and they've learned ours."

One sector – textiles and apparel – projects gains if China was to lose its MFN status. The American Textiles Manufacturers Institute says China has become the largest foreign US textile supplier, but higher tariffs would cut into its exports. It was unlikely that China's quota share would be redistributed, the association said. The gain would be for US companies.

Most exporters anonymously fault the Clinton administration for taking seriously the president's rhetoric on China during his election campaign. Like Mr Cal Cohen of the Emergency Committee for American Trade, they argue that the development of China's market economy promotes human rights more than any other measure.

Companies complain that the administration has sent mixed signals. The commerce department put China on top of its Big Emerging Markets list, a strategy for pushing exports in 10 regions outside the European Union and Japan. At the same time the president and the state department were issuing threats.

Exporters are weary of the annual MFN renewal exercise. They hope that, given any reasonable progress, the administration will give China a multiple year renewal or look elsewhere for a less ruinous issue with which to put presure on Beijing.

On Capitol Hill, where the Democrats used to assail President George Bush regularly for not promoting human rights, sentiment has begun to shift towards renewing MFN. "There are too many jobs at stake," said a long-time congressional aide. "The momentum now has gone the other way."

TRADE NEWS DIGEST

# GEC resolves S Korea rail row

GEC-Alsthom said yesterday that it had resolved a dispute among its South Korean subcontractors that threatened to derail a $2.4bn (£1.6bn) contract to supply the *train à grande vitesse* (TGV) for the country's new high-speed rail system.

The row erupted last November when GEC-Alsthom selected Hyundai Precision and Industry instead of Daewoo Heavy Industries to head a consortium to build the TGV under licence in South Korea.

Daewoo protested, calling the decision unfair. It said it had been GEC-Alsthom's main partner when the Anglo-French group bid for the high-speed train contract against Siemens of Germany and Mitsubishi of Japan. GEC-Alsthom said Hyundai was selected as the consortium leader on the basis of its industrial and technical capability.

Daewoo, expressing fears that it would not have access to technology transfers if it remained a junior partner in the consortium, filed a suit to block talks between GEC-Alsthom and the South Korean government on a final contract.

Following the dismissal of the suit last month by a South Korean court, Daewoo has now agreed to join the TGV consortium with the guarantee that it will have full access to technology transfers, GEC-Alsthom said.

Thirty-four of the 46 TGVs ordered will be built in South Korea. Hyundai and Daewoo will have an equal share in the production of the engines, while Hanjin Heavy Industries will be responsible for the carriages. *John Burton, Seoul.*

## Qantas plans China service

Qantas, the large Australian airline in which British Airways holds a minority stake, has said that it wants to re-start a service to China on June 1 – a move which could sound the death knell for the fledgling Australian carrier Australia Air International. AA secured rights to China last year from the International Air Services Commission, which allocates Australia's international routes.

At that stage, Qantas, which ceased operations to China in 1987, did not make an application. AA had hoped to start operating in 1993, and even published proposed schedules but the carrier subsequently failed to meet IASC financial requirements. Qantas plans a once-a-week flight to Beijing via Guangzhou, using a Boeing 767 aircraft. *Nikki Tait, Sydney.*

## Swiss diesel deal for VM

VM, the Italian diesel engine manufacturer, has won a contract worth more than L20bn (£8m) to supply six-cylinder engines for the Swiss army's new Duro troop transporter. The contract is with Bucher Guyer of Niederveningen, which will produce 2,000 vehicles over the next four years. VM, which is based near Bologna and supplies Alfa Romeo, Ford and Rover, is to provide the Ecosystem Power (EP) 638 LI engine which has a maximum speed of 100km per hour and meets European Union emission standards due to come into force at the end of 1995. *John Simkins, Milan.*

## John Brown wins US contracts

John Brown, part of Trafalgar House of the UK, yesterday announced two big US contracts totalling $70m (£47m), both awarded by European chemicals companies. The larger deal, worth $40m, is to design and construct a speciality chemicals plant in Theodore, Alabama for Hüls, the German chemical company. John Brown has also won a $30m contract to provide engineering and procurement services for Solvay Polymers' polyethylene finishing complex at Deer Park, Texas. *Andrew Baxter.*

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# London hands car pricing case over to Brussels

By John Griffiths

The UK government yesterday effectively handed over to Brussels responsibility for implementing the Monopolies and Mergers Commission recommendations for increasing competition in car sales.

In doing so it has acknowledged its failure to make carmakers fall into line with the watchdog's findings and at the same time angered consumer groups which claim that car prices are excessively high in Britain compared with the rest of Europe.

Motorists and other parties must now wait to see what conclusions the Commission reaches in its current review of "block exemption," the selective distribution system which allows carmakers to sell through exclusive networks.

It is this system, requiring an exemption from normal EU competition rules, which consumer groups blame for allegedly making UK car prices higher than in many other parts of Europe - and on which much of the MMC's own case rests.

The exemption, granted in 1985, runs out on June 30 next year. The motor industry has already been warned by the EC competition directorate that renewal will depend largely on manufacturers' adherence to EU limits on car price differentials across Europe and other signs that consumers are not being disadvantaged.

It is clearly the hope of the UK government that the MMC's concerns will be adequately addressed by the Commission, and that no further action will be needed by Westminster.

The MMC's report on car distribution and sales, published almost exactly two years ago, found that a complex monopoly existed in favour of 24 car suppliers arising out of the exclusive distribution system.

The MMC identified a number of restrictions imposed by suppliers in agreements with dealers as operating against the public interest.

It also found that a scale monopoly existed in favour of Ford, as the UK market leader together with its wholly-owned subsidiary, Jaguar, but did not find that this scale monopoly operated against the public interest.

Ford and other makers have dug in their heels against the recommendations, insisting that they are too prejudicial to their interests.

Consumer groups have been consistently critical of both manufacturers and dealers, claiming that mediocre service and repair performance undermines the whole concept on which block exemption itself had been based - namely that cars are so complex, and have such big safety implications, that a dedicated, exclusive sales and after-sales network is warranted.

Consumer groups want a market free-for-all, with manufacturers obliged to supply cars to virtually any outlet which wishes to sell them.

# Rail companies face £500m bill on rolling stock

By Charles Batchelor, Transport Correspondent

Rail companies which take over British Rail's passenger operations can expect to pay about £500m in charges to lease the trains and carriages they will need.

This sum is in addition to the £2.2bn which the government announced last month they will pay for the right to run their trains on the national rail network.

The government's programme to privatise BR envisages the creation of three rolling stock leasing companies which will take over BR's existing trains and carriages and also buy new ones for leasing on to the train operators. The operating companies will not be required to lease their rolling stock but most are expected to do so.

Details of the leasing arrangements have been eagerly awaited by potential bidders for BR franchises which are expected to go on sale next year.

Negotiations between the department of transport, the Treasury, BR and Hambros, the merchant bank which is advising on the rolling stock companies, are still continuing. The government is keen to establish a commercial regime for pricing the leasing deals but this is proving difficult in the absence of an existing market for rolling stock leases.

The £500m leasing charge will in theory not prove a burden to the companies which take on rail franchises because it will be matched by an increase in the Treasury subsidy. Any increase in the subsidy requirement could however demotivate managers, some of whom have already expressed concerns at the amount of track charges they will have to pay.

Potential bidders for rail franchises are concerned that very few details have been released about the rolling stock companies less than three weeks ahead of the formal creation of a devolved railway network on April 1.

The government plans to establish three rolling stock companies which will each take over a mix of BR existing rolling stock. Two of the rolling stock companies will be based in London, with a third in Sheffield.

The department of transport expects to reach an agreement on the leases by June and to have concluded agreements with the present BR operating companies by September or October. No detailed agreement has yet been reached on how the leasing charges would be allocated to the 24 BR operating companies which are to be franchised. They are unlikely to mirror the allocation of track charges however, because they will depend on type rolling stock.

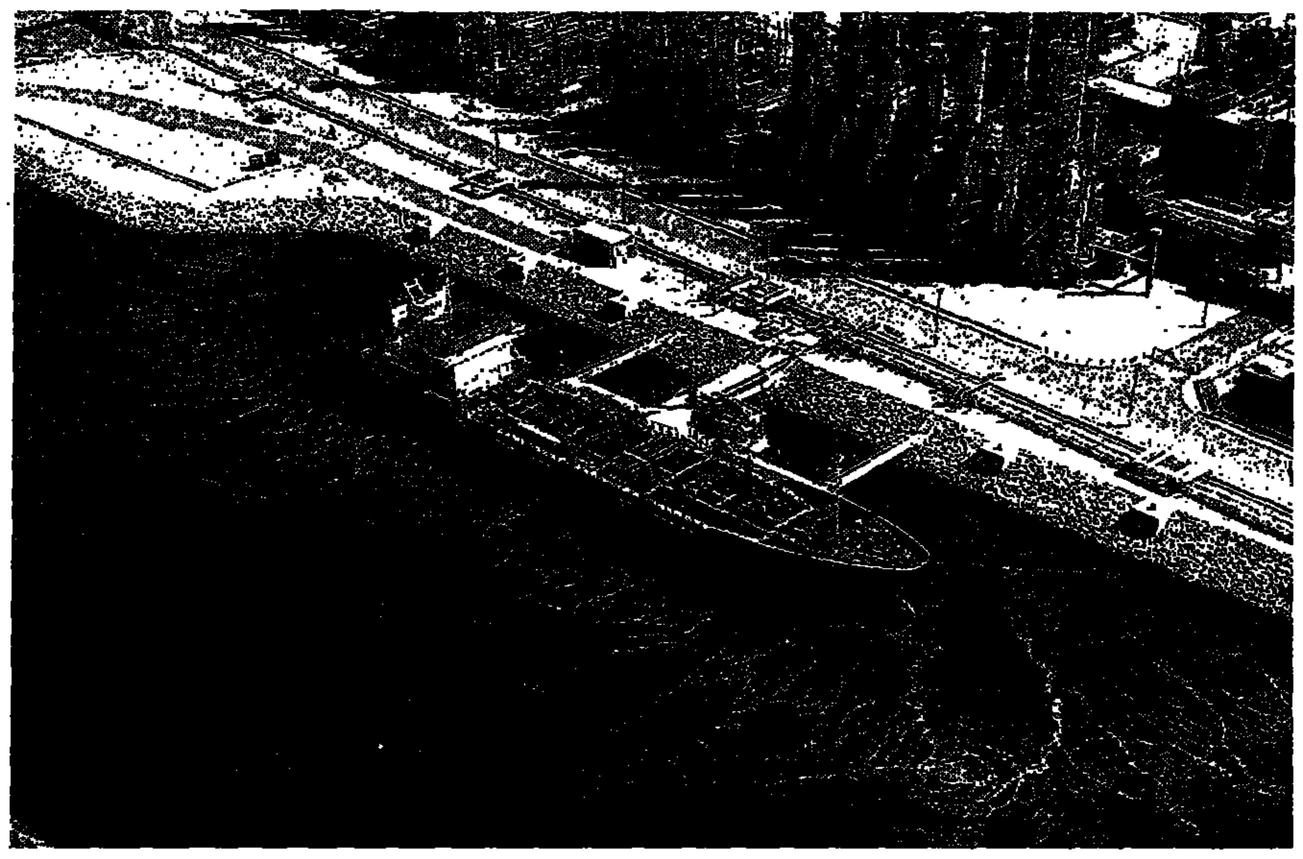
# Bubbles to battle oil spills

Air bubbles have become the latest weapon in the battle to contain small oil spills from tankers, Robert Corzine writes.

Shell has installed a bubble-based containment system at its Stanlow manufacturing centre at Ellesmere Port in Cheshire, pictured right.

A wall of air bubbles released from hundreds of small holes in hoses anchored to the bottom of the Manchester Ship Canal is strong enough to confine minor spills of oil or chemicals, giving crews time to activate more substantial containment systems, like inflatable booms. The system was first tested by the Royal Navy at Plymouth.

Captain Brian Davies-Patrick, Shell's marine superintendent at Stanlow, says the bubble barriers are akin to "immediate first aid". The company, however, says it has had few spills from tankers at the Ship Canal berths.



# Planners urged to discourage use of cars

By Charles Batchelor, Transport Correspondent

Local authorities in England will be encouraged to take planning decisions that limit the scale of out-of-town developments and reduce reliance on private cars under guidance issued yesterday.

Mr John Gummer, environment secretary, announced planning guidelines intended to reduce the growth of car and commercial vehicle journeys and to increase the scope for use of public transport.

The planning guidance note represents the most detailed statement on transport policy since the government committed itself to an environmental strategy at the 1992 Rio Earth Summit.

Three main aims of the new planning policy are:

- To ensure that new developments which necessitate journeys are built where there is a choice of transport. Shops, offices, cinemas and leisure centres should be close together so one journey can serve several purposes.
- To provide housing developments with public transport links and nearby local services so journeys can be made on foot or bicycle.
- To improve the quality of life in towns and cities - which are efficient transport locations - while maintaining the vitality of the countryside, to reduce the need for long-distance commuting.

Consistent policies to reduce the need to travel could result in a 15 per cent reduction in fuel consumption and exhaust emissions over 20 years, Mr Gummer said.

The impact of the new policies will be gradual because only 1 per cent to 2 per cent of the country's stock of buildings is renewed each year. But over time the new policy, combined with the government's plan to raise fuel duty by at least 5 per cent a year, will make a difference.

Environmental group Friends of Earth said traffic growth would not be cut while "motorway mania is allowed to continue". The transport department will soon announce a review of its £23bn road-building programme.

# PM firm on fight against terrorism

By David Owen and Michael Cassell

The IRA cannot bomb its way to the negotiating table, Mr John Major told MPs yesterday, as the government stepped up efforts to co-ordinate a convincing response to the latest wave of terrorist outrages in a series of behind-closed-doors meetings.

A 50-minute meeting yesterday morning between the prime minister and Mr James Molyneaux focused on the political talks process and security, with the Ulster Unionist party leader calling for pressure to be put on Dublin to crack down on terrorism.

The UUP leader later released a toughly-worded statement describing Dublin's "updated" arrangements for dealing with terrorists as "seriously flawed" and the lack of results as "quite scandalous."

He dealt a blow to the government's hopes of pressing ahead with the three-stranded political talks process, saying that institutionalised structures for dealing with north-south relations – such as those advocated by nationalists – would not serve any practical purpose and "merely create suspicion."

Pressure for the government to ensure that a tougher line is taken against terrorism will increase tomorrow when the Tory backbench Northern Ireland committee holds its next meeting.

Meanwhile, Downing Street hinted that moves might be put in train to stage another meeting between the prime minister and Mr Albert Reynolds, his Irish counterpart, before their next scheduled get-together in June. One informed source said he was certain the two men would meet before June.

It was announced yesterday that Mr Molyneaux will in April lead a four-man delegation to the United States to meet senior politicians and White House and state department officials.

# Consumer spending cut back by tax fears

**By Emma Tucker and Andrew Taylor**

*Evidence that UK consumers* reined back their spending in February ahead of next month's tax increases *yesterday raised expectations that the* government may have to ease the burden of higher tax bills by cutting *interest rates again.*

The Confederation of British Industry said its new distributive trades *survey confirmed that unimpressive* sales in January were more than a "flash in the pan". The data showed that last month retailers reported the lowest year-on-year increase in sales since volumes started to rise in January 1993.

*But other figures yesterday pointed* to robustness in the UK building industry. Construction orders won by *contractors were 30 per cent higher* in the three months to January 31 than in the corresponding period 12 *months* earlier.

The figures, published by the Department of the Environment, indicated that the upsurge in orders since the autumn was continuing to provide further evidence that the recession in the industry may be coming to an end.

The CBI said it was not particularly concerned by the slowdown in retail sales growth. Mr Nigel Whittaker, chairman of the confederation's distributive trades panel, said it proba*bly reflected the fact* that some consumers were already anticipating the impact of tax increases due to take effect in April.

"Equally, other consumers may also be holding back until they are sure just how much their pay packets will be affected", he said.

Retailers were confident they would "weather the storm" of tax increases. "It will cause a bit of a blip for a month or two. But the underlying trends suggest we are going to emerge *from it in a satisfactory way,"* said Mr Whittaker.

Overall, 40 per cent of retailers surveyed said business was higher than in February 1993, while 30 per cent said it was lower. The 10 per cent *difference between the two figures* compared with a positive balance of 15 per cent in January, and was the *smallest since January 1993.*

Only 16 per cent of retailers said sales were good for the time of year, while twice as many – 33 per cent – thought they were poor.

Inflation continues to show few signs of picking up, according to the *survey.* A positive balance of 20 per cent of retailers reported that prices were up on 12 months earlier. With the exception of *January's balance,* this was the weakest price trend since the survey began in 1983.

*The survey also showed that* imports are increasing their presence in British shops. The CBI said the proportion of *deliveries from suppli*ers accounted for by imports increased in the year to January. A positive balance of 1 per cent in January rose to 7 per cent in February.

# Cammell Laird shipyard sale is 'imminent'

**By Ian Hamilton Fazey, Northern Correspondent**

Cammell Laird, the Merseyside military shipyard which closed last year, is within weeks of being sold to a ship repair company, which plans to employ 1,600 people there by the end of next year.

VSEL, the Barrow-based nuclear submarine builder which owns the yard, yesterday confirmed that the sale was imminent, with a March 31 deadline imposed for completion.

The bidder is Coastline Industries, which already leases Cammell Laird's dry docks and other facilities and has taken on about 600 workers in the last year to fill contracts with several shipping lines and owners.

Coastline was founded five years ago by Mr John Stafford, a former Grant Thornton accountant, to exploit ship repairing opportunities following the recovery of the port of Liverpool and intensification of Irish Sea trade.

The deal was negotiated in January by Mr Amin Amiri, corporate finance partner of Grant Thornton in Liverpool, but completion has been bogged down by legal arguments over site values and long-term environmental liabilities.

These are understood to have forced VSEL to lower its price, while confining future use of the site to shipbuilding and ship repair.

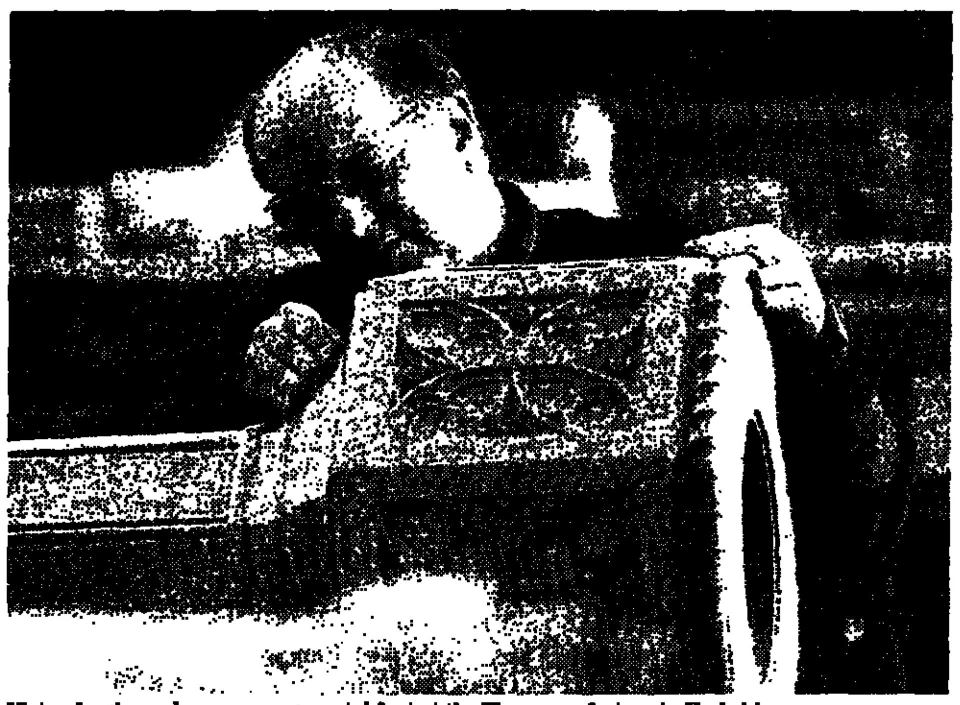
VSEL has imposed the March 31 deadline to force sale or withdrawal. Mr Norman Broadhurst, VSEL finance director, said: "There are other shipbuilding companies now interested. We gave Coastline exclusivity, but it is now up to them to complete."

Mr Jonathan Diggines, director of the Manchester office of Murray Johnstone, the Glasgow-based fund manager, yesterday confirmed it would be underwriting the deal. The price is not being disclosed, but about £10m is understood to be available. Allied Irish Banks is providing loan and working capital for Coastline's expansion.

Rival bids for Cammell Laird are understood to depend on the European Commission allowing intervention funding. Labour and Tory MPs from the area discussed this in Brussels yesterday.

However, VSEL has been consistently refused EU help for Cammell Laird because it made warships – intervention funding is limited to civil yards faced with closure.

If the deal is completed, Coastline will take over Cammell Laird's all-weather construction hall, three dry docks and its wet basin. Some of the facilities may be leased later.



Victor Jarvis works on an ornamental font at the Thompson factory in Yorkshire Picture: North News

# Company carves out contract

**A small Yorkshire factory specialising in hand-carved furniture has won its biggest-ever order – from the owner of one of America's largest furniture companies.**

**When Edwin J Shoemaker wanted to restore a Lutheran chapel in Monroe, Michigan, in memory of his late wife, he could not find the craftsmen to do the job in the US, despite owning 18 furniture factories. So he turned to the firm of Robert 'Mousey' Thompson, in Kilburn, N Yorks, whose pieces bear the distinctive carved mouse trademark.**

**When the £170,000 contract for pews, altars, doors, and a crucifix is finished next week, 32 staff will have put in 10,000 man-hours over 9 months.**

# Fishermen urge renewal of seal cull

**By James Buxton, Scottish Correspondent**

The highly controversial issue of culling seals is to be raised by UK fishermen when they meet a government environmental agency later this month. The fishermen say seals are threatening their livelihoods by the damage they cause to fish stocks and to fishing gear.

The fishermen, from the seals working group of the Scottish Fishermens' Federation, will tell Scottish Natural Heritage, the government's environmental agency for Scotland, that it is time for renewed culling to reduce seal numbers. The group includes representatives of fishermens' organisations in England and Ireland.

Culling was abandoned in 1978 when the then Scottish Secretary bowed to intense pressure from environmental groups. It is widely accepted that the number of grey seals around the UK coast has risen since then: the fishermen believe it has gone up from 70,000 to between 100,000 and 110,000, and is increasing by about ten per cent a year. About 90,000 grey seals are thought to be in Scottish waters.

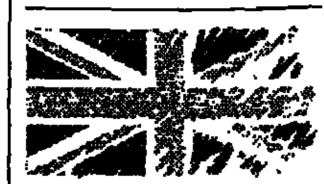
Mr Roddy McColl, chairman of the group, says it has scientific evidence suggesting that seals are eating up to 240,000 tonnes of fish a year, of which half is of commercially exploitable species. With some European Union fish quotas amounting to about 100,000 tonnes a year, this means that "seals have a substantial EU quota to themselves."

Scottish Natural Heritage, which will be meeting the fishermen on March 29 at their request, said yesterday: "We feel the case has to be well proven that seals are causing the damage before protection can be lifted. So far the evidence is not conclusive."

The fishermen, who last raised the issue of culling seals about three years ago, hope that the SNH might at least recommend carrying out more research into seal numbers and their effect on fish.

Under the 1970 Conservation of Seals Act fishermen can obtain licenses to shoot individual marauding seals.

## Britain in brief



### Cable seeks TV deal over Wimbledon

**The cable television industry proposed co-operation with the BBC over *acquiring* rights to the Wimbledon lawn tennis championships. The BBC's four-year agreement with the club comes to an end this summer and British Sky Broadcasting, the satellite venture backed by Pearson, owners of the FT, has said it will bid against the BBC.**

**The cable industry, which has become more interested in acquiring exclusive rights wants to be able to televise play on the outer courts rarely covered by the BBC. In return cable could help the BBC with the cost of acquiring the rights to televise Wimbledon.**

### VAT cut in Manx budget

Value added tax is to be cut on some tourism-related services in the Isle of Man in a bid to boost the industry. Measures announced in the island's budget also included a six-month penalty and interest remission scheme from April 6 for those with income tax and VAT liabilities relating to income omitted or understated in declarations since April 1987.

The treasury hopes the amnesty, designed to enable people and companies to regularise their liabilities without incurring penalties or interest charges, will produce several million pounds of estimated outstanding tax debts.

### Curbs sought on wind farms

**Restrictions on wind farms are backed by the Wales Tourist Board in a new strategy for tourism. It endorses the policies of the Countryside Council for Wales which is opposed to wind farms in national parks and other designated areas.**

### Fortex shelves lamb scheme

Hopes that up to 700 jobs could be created in Scotland or central Wales were dashed when the Fortex Group of New Zealand shelved plans for a large lamb processing plant. Fortex blamed the decision on disappointing half-year results, which it said were due largely to loss of livestock in severe storms in New Zealand.

### Top military post filled

**General Sir Peter Inge, below, became Britain's top military officer in succession to Sir Peter Harding, who resigned as Chief of the Defence Staff after allegations of adultery.**

**The 59-year-old officer became Chief of the General Staff two years ago after service in Hong Kong, Malaya, Libya, and Germany, had been acting as the caretaker military adviser to the government.**

### Kop for sale

Fragments of the stepped terrace known as The Kop at Liverpool Football Club are to be sold for charity. The embankment, on which 20,000 fans can stand, was named after the hillside on which the battle of Spion Kop took place in the Boer War. The terrace is to be bulldozed at the end of the season under new safety guidelines. Pieces of concrete from The Kop, which to many fans is a symbol of the club's former domination of domestic soccer, are to sell at between £2.99 and £32.

# MANAGEMENT

**Michael Smith** explains how companies can now control electricity costs

## The power to choose

Keith Smith, buyer of utilities at the McDonald's fast food chain, is beaming at a chart of one restaurant's electricity consumption. He likes the power it gives the company's restaurant managers.

"Look at that," he says. "They've done all the right things there. The consumption falls when it should; the store workers have switched off the cookers and lights when they do not need them. It's a perfect example to show to other stores."

The chart comes courtesy of Eastern Electricity which, from next month, is to supply power and associated services, including diagrams showing past consumption, to 500 McDonald's stores in England and Wales.

Eastern's willingness to supply power and other facilities as part of the service, yet still undercut offers from rival power companies, was one reason why it won the business.

In the past few months throughout Britain big companies like McDonald's have been evaluating for the first time a range of offers for power supplies as they and the suppliers gear up for the next phase in the liberalisation of the market.

From April 1 any electricity consumer using more than 100 kilowatt hours at the peak of its demand will be able to buy its supplies from any registered supplier including the 14 mainland UK distributors and the two England and Wales generators. Until now they have had to buy power from their local distributor.

The previous limit of 1 megawatt, 10 times the new threshold, encompassed only about 5,000 consumers. From April about 50,000, including businesses, schools, hospitals and leisure centres, will be able to shop around and many are taking advantage.

More than 7,000 in the 100kW to 1MW market, a fifth of those eligible, have already made arrangements to take their supplies from a company other than their regional electricity supplier. The industry expects the figure to reach about 15,000 within the next year.

Price cuts have reached 20 per cent for a handful but the majority which have switched are estimated to be making annual savings on their electricity bills of between 4 and 10 per cent. Many of those which have stayed with their regional distributor have also gained financially.

But the benefits of the liberalised market are not just in the price. Companies, or at any rate the large ones, are finding they are in strong position to demand a tailor-made service which can improve their energy management.

As a large company, with all the advantages which that brings for bulk buying, McDonald's was better placed than most prospective buyers – yet it received offers for the whole country from just four suppliers of the 14 approached.


Trevor Humphries
Electricity, not burgers: Keith Smith with consumption charts at McDonald's

Smith was impressed by only one company other than Eastern. "It was apparent that several suppliers were poorly prepared. There was not the expertise to deal with the market. One company, for example, had a very good salesman but poor back-up.

"Several of the offers we received had hidden costs," says Smith. Some were able to offer charts showing consumption in each store by the half hour but they wanted to charge extra, on top of the prices they had quoted, and that was already more than Eastern's quote.

Smith says McDonald's has become much more conscious of energy costs in the past two years and now sees the half-hourly breakdown of consumption as an essential management tool. "It gives the manager of a store a picture of what has been happening in the store even at times when he is not there."

McDonald's estimates that it will save £1.4m on its energy bill each year as a result of the deal with Eastern, which is worth about £18m. A separate deal in Scotland for the company's 20 stores there is leading to savings of more than 30 per cent.

Another company taking advantage of the newly competitive UK electricity market is Stakis, the hotels and casinos group. Stakis will make significant savings on its electricity bill after a deal with Scottish Hydro-Electric involving the 25 of its 52 hotels and six casinos which are big enough to be able to shop around for supplies. It expects its £2.3m-a-year electricity bill for the 31 units in the Hydro deal to fall by about £250,000. Like McDonald's, Stakis was not spoiled for choice. Bill Gunn, in charge of *utilities purchasing for the group*, says only the two Scottish power distribution companies were prepared to make an offer covering hotels throughout the UK.

Stakis's main requirement was simplicity. "Electricity bills seem to us to be far too complicated with different charges for maximum demand, for supply and for different times of the day. We wanted a uniform price for each unit of electricity which is the same for all hotels and for that price to include everything.

"We have limited resources and a single price makes billing far easier to double check. It is also useful for comparison purposes. If one hotel is using far more units than another with similar occupancy rates we will know there is something wrong. Perhaps they leave everything on in the kitchen overnight."

Both Hydro-Electric and Scottish Power were able to meet Stakis's request for uniform prices but Hydro's tender was lower.

Not all companies, however, have found it easy to shop around. At Fowler & Holden, John Hardy, managing director, badgered electricity suppliers for several months before he received an offer he considered may be acceptable. "At first I could not get suppliers to compete," he says. "They seemed only interested in making decent offers to large companies. But large companies are my competitors and if they are getting big cuts in their electricity bills I want them too."

The first six offers made to Fowler would have resulted in its power bill remaining at about £26,000 a year. It was only this week when one company, Powerline, the Midlands Electricity subsidiary, revised an earlier proposed deal to produce annual savings of about £2,000.

The lateness of the proposed offer means Fowler will be unable to change supplier until after April 1, since the electricity authorities need 20 working days' notice. Hardy says the delay has been worthwhile. "Unless we had been prepared to wait, the introduction of competition would have meant virtually nothing to us."

## Seven strategies to change your company

### There is more than one way to tackle organisational upheaval. **Adrian Furnham** considers the options

The trouble with the idea and practice of organisational change is *that it is both boring and anxiety* provoking. The number of magazine and newspaper articles, courses, memos and self-help books dealing with change is overwhelming.

"Adapt or die; change or decay" is not a simple rallying cry for the senior manager, it is a reality. But the question is how to bring about successful change to maximise effectiveness and minimise pain.

Managers choose different strategies with varying consequences.

● *The fellowship strategy:* This approach relies heavily on interpersonal relations, using seminars, dinners and events to announce and discuss what needs to be changed and how. People at all levels are listened to, supposedly treated equally and conflicting opinions are expressed. This "warm and fuzzy" approach emphasises personal commitment over ideas – the change process may have serious problems getting going as a consequence. Because this strategy is averse to conflict it can miss crucial issues and even waste time. Many fellowship-types leave the organisation and can only be replaced by those who have a need to belong.

● *The political strategy:* Here the power structure is targeted by attempting to influence the official and unofficial leaders. The strategy seeks to identify and persuade those in the organisation who are most respected and who have large constituencies. Political strategists flatter, bargain and compromise to achieve their ends. But this de-stabilises the organisation because of ongoing shifts in people's political stances. Maintaining credibility can be difficult because the strategy is so obviously devious. Getting people to show their true colours in this way is never simple.

● *The economic strategy:* The cynical economist believes that money is the best persuader. The person who controls the purse strings can buy or change anything. Everybody has a price. This is the rational *"homo-economicus" approach* that assumes people act more or less logically but that their logic is based on economic motives. But "buying people off" can be costly and the effects short-term. The strategy also ignores emotional issues and all questions besides bottom-line profit.

● *The academic strategy:* This approach assumes that if you present people with enough information and the correct facts they will accept the need to change. The academic strategist commissions studies and reports from employees, experts and consultants. Although such strategists are happy to share their findings it is difficult to mobilise energy and resources after the analysis phase. Analysis paralysis often results because the study phase lasts too long and the results and recommendations are frequently out of date when they are published.

**Most people do not like being treated as machines and so do not feel committed to changes**

● *The engineering strategy:* This is the technocratic approach that assumes that if the physical nature of a job is changed, enough people will be forced to change. The strong emphasis on the structural aspects of problems leads to a sensitivity to the environment which is particularly helpful in unstable situations. The concern over channels of communication can prompt structural change, but fails to commit most people. Most people do not like being treated as machines and hence do not feel committed. Such change can also break up happy and efficient teams. The strategy is limited because only high-level managers can really understand it, it is impersonal and it ignores the question: What is in this for me?

● *The military strategy:* This approach is reliant on brute force *and sometimes ignorance. It is* at times used by the military and the police, students, pressure groups and political parties. The emphasis is on learning to use the weapons for the fight. Physical strength and agility are required and following the plan is rewarded. But the change-enforcer cannot relax, in case the imposed change disappears. Furthermore, force is met by force and the result is ever-escalating violence.

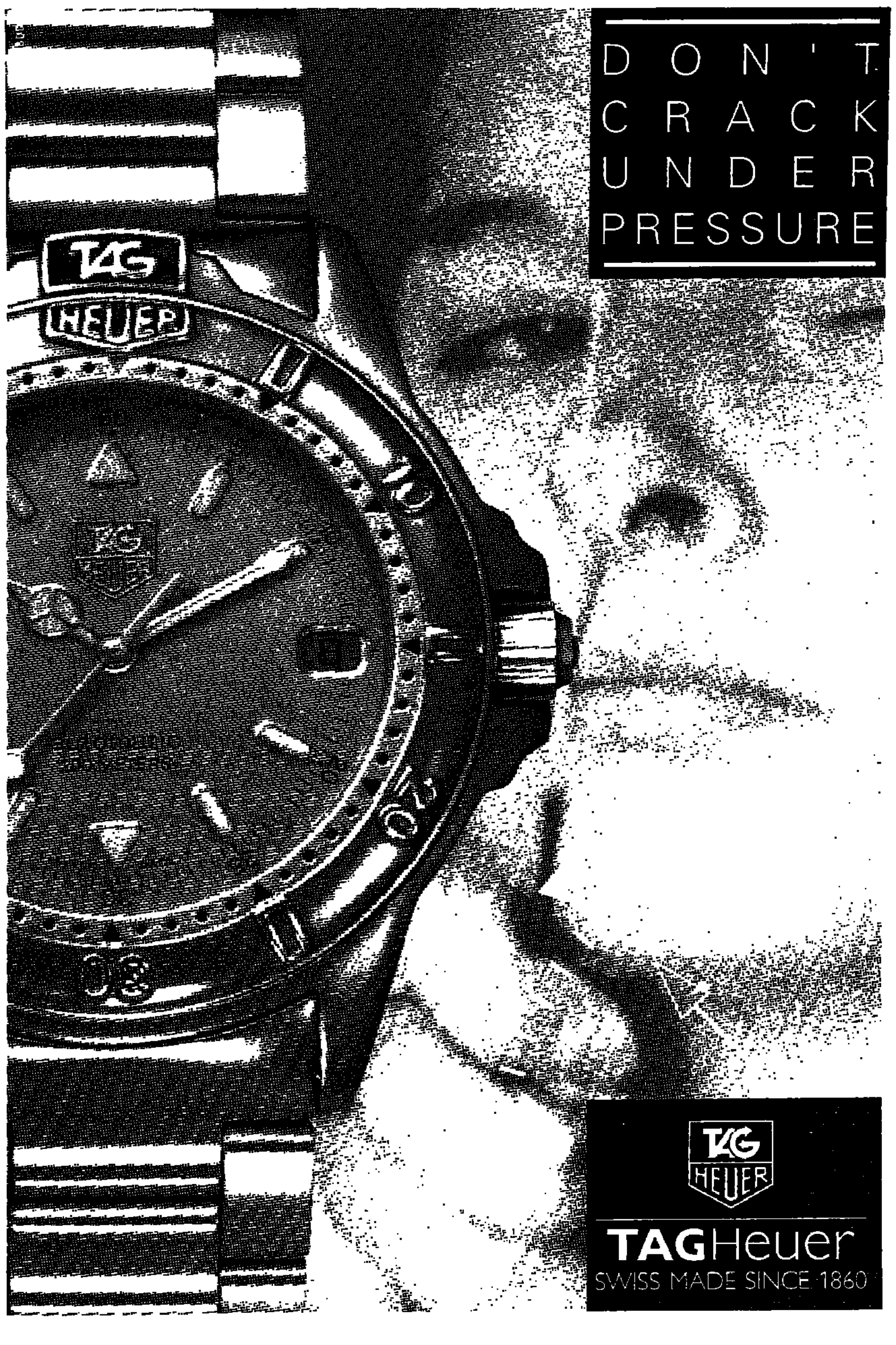
● *The confrontational strategy:* This high-risk strategy reckons that if you can arouse and then mobilise anger in people to confront the problem, they will change. Much depends on the strategists' ability to argue the points, as well as being able to stir up anger without promoting violence. This approach encourages people to confront problems they would prefer not to address but tends to focus too much on the problem and not on the solution. Anger and conflict tend to polarise people and can cause a backlash.

Few of these strategies occur in isolation. But they do have different basic assumptions about who to influence, how to proceed and what to focus on. Each tends to be effective at addressing certain change problems but very bad at dealing with others. The political strategy has problems with credibility; the economic approach with maintaining change, and the academic with implementing findings. But for the professional who must demonstrate his worth to the organisation by implementing change, any of the above might help him.

The trouble is that strategies tend to be chosen by chief executives for personal reasons rather than as a result of any well-considered set of options. An inappropriate strategy may cause more trouble than the initial reason for change.

*The author is head of the business psychology unit at University College London.*





# BUSINESS AND THE ENVIRONMENT

*WORLDWIDE WASTE*

## Big boys' game comes under fire

### Germany's national recycling scheme faces growing attack, writes **Ariane Genillard**

Wuppertal, a smoky town in the recession-hit coal mining region of northern Germany, is hardly inspiring. But for Ernst von Weizsäcker, one of Germany's most prominent environmentalists, this is just the place for an institute devoted to the fight against pollution.

Von Weizsäcker, of the Wuppertal Institute for Climatology, recently announced that he was retiring as president of the advisory council of Duales System Deutschland (DSD), Germany's three-year-old national recycling scheme.

Von Weizsäcker calls Germany's most ambitious environmental project a "dangerous manipulation" which "serves the throw-away society". He has joined the swelling chorus of critics who claim that the waste disposal scheme is misconceived.

Von Weizsäcker's criticism is directed at the monopolistic structure that characterises DSD and makes the country's recycling industry increasingly concentrated in the hands of a few utilities and energy groups.

DSD was created in 1991 by 600 companies in response to the packaging law drawn up by Klaus Töpfer, the environment minister. This makes manufacturers and retailers responsible for collection and recycling of packaging waste. It also sets collection and recycling quotas, which increase over time and must be enforced nationally.

Industrial groups in Germany set up DSD as a national waste collection scheme, which signed contracts with waste recyclers. To meet the cost of collection, DSD imposes a fee, borne mostly by consumers through higher prices and shown as a green dot on packaging.

Because the law insisted the system should be nationwide, DSD quickly spread to nearly all German cities. Few German households are without the special yellow bins for packaging waste with green dots.

Three years after its creation, DSD's quasi-monopoly has angered middle-sized German recyclers and environmentalists who say the giant waste collector is squeezing out of a profitable market the small players who represent a pool of innovation for new environmentally-friendly recycling technologies.

The Federal Cartel Office has admitted there is a problem but argues that DSD is only fulfilling the packaging law. Undaunted, the medium-sized companies are intensifying their lobbying efforts within government circles. They point out that in 1992, more than 140 waste management companies were acquired by larger groups, compared with 60 in 1990.

**'Innovation and market strategies for recycling specific waste products no longer have a chance'**

The medium-sized companies are also protesting against 10 year-long contracts signed by DSD with municipalities and with the large utilities and energy groups. "Innovation and market strategies for recycling specific waste products no longer have a chance," explains the federal association of medium-sized companies (BVMW). The association is proposing continuous tender processes and price negotiations, which would allow them to bid for DSD contracts. They add that such measures would also open the market to foreign competition.

Waste disposal companies created by municipalities now make up one in three of DSD's clients. "Municipalities immediately saw a tremendous source of revenue in this business and made sure the contracts did not escape them," says Franz-Josef Fraundorfer, managing director in the German office of Arthur D Little, the consultancy group.

Large utilities and energy groups have also moved into waste recycling. RWE Entsorgung, the waste management subsidiary of RWE, Germany's biggest utility group, has a turnover of more than DM2bn (£700m). Three years old, it has acquired 100 companies in its expansion drive, and DSD accounts for 15 per cent of its business.

Other German concerns have also stepped in, with Veba, the Düsseldorf-based energy group, processing 120,000 tonnes of plastics in a recycling plant linked to its oil refinery in Bottrop. And Thyssen Handelsunion, a subsidiary of Thyssen, the big engineering and steel group, is involved in building up recycling plants in eastern Germany.

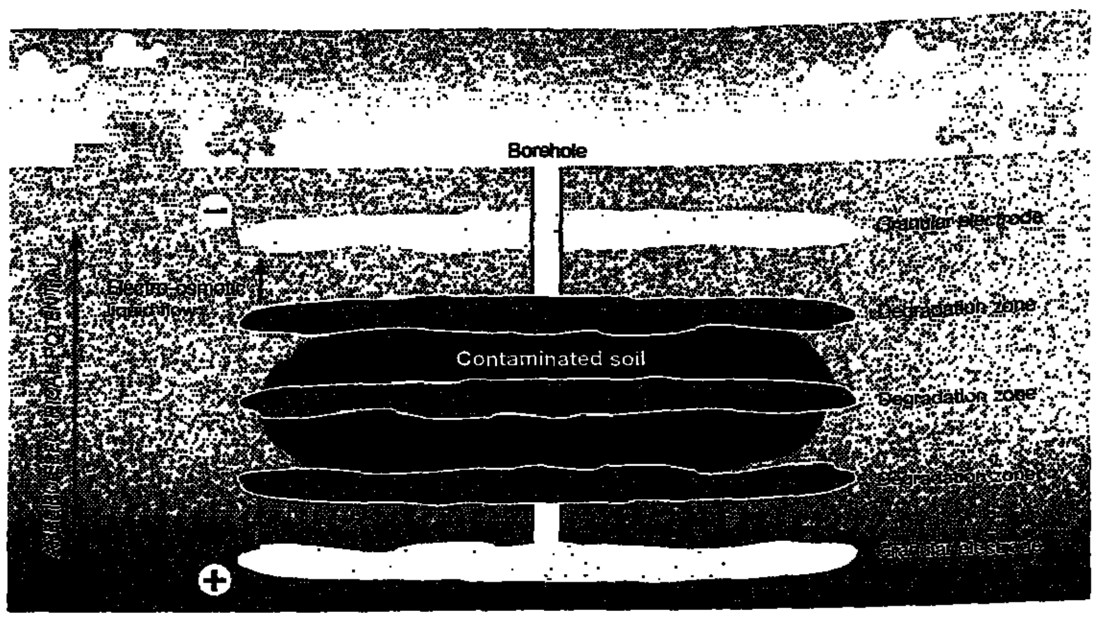
These groups argue that the future of waste disposal in Germany lies with those who can invest large sums in complicated recycling plants. High investments also justify long-term contracts, DSD officials say.

According to the Environmental Council, an advisory body to the federal states, four or five companies are likely to share some 40 per cent of the domestic waste market in coming years.

DSD says the concentration process in the industry had started before it came into being, but medium-sized companies claim the DSD's structure favours large companies. "DSD is dominated by companies such as Unilever and Procter & Gamble who have no interest in meddling with the small players. It is a big boys' game," says one entrepreneur.

The government has meanwhile ignored critics from the smaller companies. Töpfer says his packaging law achieved a 13 per cent drop in packaging waste in Germany in 1993.

*Next week: US.*




## Lasagne recipe for soil renewal

### A new technique for salvaging contaminated land is being tested in the US, as **Frank McGurty** explains

A novel approach to one of the US's most common but most intractable environmental problems is being tested by a team of scientists at a US federal uranium-processing facility in Kentucky.

The field test has nothing to do with radioactive waste or nuclear safety, however. The scientists are seeking a process for cleaning up leaked fuel, industrial solvents and other substances which have contaminated the soil at thousands of sites in the US. The technology raises new hope that many of these areas of land can return to productive use. It also promises to speed up the faltering 14-year effort to clean up the worst of the areas.

"One of the things that has hampered progress is a slow pace of technological innovation," says Bill Roberts, a toxic waste expert at the Environmental Defence Fund, a private lobbying group. Of the 1,200 to 1,300 sites designated as the most dangerous under the Superfund programme, set up in 1980 by the US government's Environmental Protection Agency (EPA) to clean up contaminated land, about 200 have been reclaimed so far.

The new technique, known as the lasagne process, involves using electrical current to draw wastes through "treatment zones" in the soil. Toxic waste materials can often be rendered harmless in the zones, which resemble the layers of a lasagne, without being brought to the surface. Scientists say the process is effective in densely packed soils that are nearly impossible to reclaim with current techniques. It may also prove cheaper and safer.

As part of a wider initiative announced in January by the EPA, the project highlights the Clinton administration's policy of encouraging co-operation between the public and private sectors and among rival companies in the fight against pollution. Three big US industrial groups, Monsanto, DuPont and General Electric, have taken leading roles in the project, together with the EPA and the Department of Energy.

"The common denominator of the primary collaborators was that we each had difficult and expensive soil clean-up problems to deal with and were frustrated by the lack of cost-effective technology to do the job," says Philip Brodsky, director of corporate research and environmental technology at Monsanto, the big US chemical group. "The EPA's willingness to play a matchmaker role was critical in getting the process rolling."

Soil remediation lends itself to joint research and development. "There are economies of scale that come into play here," Roberts says. "There is no long-term return in a company investing in this kind of new technology by itself."

The effectiveness of the lasagne process has yet to be demonstrated, however, with testing so far limited to small-scale trials. The Kentucky site where its evaluation begins this spring was chosen because it is typical. In an isolated storage area at the facility, the solvent trichloroethylene, widely used as a paint-stripper, has penetrated the dense soil. The EPA says it will be "a couple of years" before comparisons of the process's cost and efficacy can be made.

Currently, the main approach to dealing with contaminated land is to excavate the toxic material and either incinerate it or seal it in watertight pits. However, toxic substances, leaking from ruptured tanks, for example, may spread deep below the surface. The expense is also prohibitive, and the risk of human exposure is great.

If the contamination is deep, but the soil is relatively permeable, wastes may have collected in ground water, which can be pumped to the surface and neutralised. But in soils with impermeable clay layers, so-called "pump and treat" methods are ineffective. Residual contamination usually infiltrates fissures in the hard clay below the ground water and eventually seeps back in.

The lasagne process may provide a solution in such cases. Brodsky, who initiated the project, says various geological conditions are present in most sites and it is impossible to pinpoint which may be suitable for the lasagne treatment. But the technology may contribute to an overall solution in a substantial proportion of them.

Brodsky's idea was to combine three existing technologies.

First, a process called electro-osmosis flushes the contaminants out of the clay fissures. A cathode is inserted into the ground, which emits low-voltage electrical current that pulls the positive ions in the waste droplets at the rate of about once inch a day.

Second, a series of "treatment zones" – the lasagne's layers – are carved in the soil. The top and bottom strata are filled with an electrical conductor, such as graphite. Waste gathers in the middle layers when the current is switched on.

The third step deals with the contaminated material once it is there. Often, catalysts are available to help convert hazardous compounds to benign substances once inside the treatment zones. Alternatively, "bioremediation" systems to degrade the waste organically are being developed by a number of companies, including Monsanto, DuPont and GE. Another option, used in the Kentucky test, is to put activated carbon in the treatment zones to absorb the contaminants.

The new technology has surfaced at a propitious time. Last month, the EPA proposed sweeping revisions of the Superfund law, following widespread perception that it has failed to achieve many of its goals.

Among its proposals, the EPA would ease standards for cleaning up some Superfund sites in an effort to encourage redevelopment of abandoned land. More importantly, the new accent on flexibility is likely to spill over into state and federal rules applying to cleaning up the thousands of waste sites not covered by the Superfund programme.

Even if the lasagne project fails, Brodsky believes the joint effort will continue. "The collaborative paradigm has already proved very productive," he says, citing advances in bioremediation, soil flushing and other areas.



# PEOPLE

## Carlton adjusts its managerial contrast

Carlton Communications moved yesterday to integrate the management structure of its ITV operations following its recent acquisition of Central Independent Television.

Andy Allan, right, managing director of Central, is to become chief executive of Carlton UK Television from mid-April. A new managing director of Central Television, yet to be appointed, will report to Allan, who will also be responsible for the sales operation of the two ITV franchises, the largest in the ITV network.

Allan, 51, has worked in broadcasting for nearly 30 years, beginning as a presenter and producer and later becoming a programme editor in the light entertainment department of ABC television. He is a former head of news at Thames Television and joined Central as director of programmes in 1984 from Tyne Tees Television, where he had been director of programmes and deputy managing director. He is also a governor of the National Film and Television School

Nigel Walmsley, the present chief executive of Carlton Television and an administrator rather than a programme-maker, will move to the headquarters of Carlton Communications as the main board director, with overall responsibility for group broadcasting.

Both Carlton Television and Central will continue to operate under separate boards, as part of the terms of their broadcasting licences.

"The opportunity to take responsibility for ITV's two largest broadcasters is irresistible," says Allan. Leslie Hill, chairman of the ITV Association for the next two years, remains chairman of Central.

## Perlin leaves Sears and goes shopping for himself

House-cleaning continues at the top of Sears with the resignation of Howard Perlin, the director in charge of acquisitions and disposals; he has been on the board since 1984.

Perlin started seven years before that as personal assistant to Geoffrey Maitland Smith, the then chief executive and now chairman.

Perlin, 47, says that, having masterminded the disposal of Satellite Information Services last month, he has brought the group to "where it wants to get, for the moment," with the business focused on retailing and home shopping.

Since Liam Strong came in as chief executive in early 1992, there has been a rapid turnover of executive directors. Aside from Roger Groom, who came on to the board in 1991, Perlin was the only executive director who remained from the pre-Strong era. Strong's own difficulties in changing the culture at Sears were illustrated towards the end of last year when Stephen Park, the finance director he had brought in from Hanson just 16 months previously, resigned.

Perlin, who joined Sears from First National Finance Corporation, reckons he has "probably gathered more experience than most merchant bankers, having completed approaching 100 transactions, including 30 MBOs" in his time with the group. Disposals in which he had a hand included William Hill and Asprey and he was also involved in the acquisition of Freemans.

He now plans to put this to good use by setting up his own private consultancy – very much a one-man-band – with the aim of providing corporate finance and business strategy advice across a range of industries. He is also building up a portfolio of non-executive directorships, and has one public company already appointment lined up.

## NatWest's newest customer runs the bank

Even before taking up his role in the new post of finance director for National Westminster's UK branch business, Paul Biddle has a related task to perform: to become a NatWest customer himself.

In moving from being finance director for Digital Equipment, the computer group, Biddle sees himself becoming a NatWest bank customer but not a banker.

He says that he regards "the business I'm joining as fundamentally a retailing business – it just happens to be financial products they're selling," he says.

He believes his new job – which he takes up in mid-April – will enable him to draw on his experience in industry. In the past he has worked for Unilever and Rank Xerox, following his training as a chartered accountant.

The priority he sees for the years ahead will be to find the right balance of ways of distributing products to customers, through electronic and telephone banking, as well as the traditional branch network.

Martin Gray, chief executive of NatWest's UK branch banking, said that Biddle's responsibilities would include developing and setting the financial strategy for retail banking operations; managing the budget planning; and liaising with other parts of the group on long and short-term financial strategies.

In creating this new role is NatWest implying it may have missed out in the past, through not having a finance director for the UK branch business?

Biddle says only that he suspects they have not put in place the appropriate management processes – such as planning and budgeting – which are "almost taken for granted in the industrial environment".

## Wheatley joins with Ashtead

Alan Wheatley, a former senior London partner of Price Waterhouse, has been appointed a non-executive director and deputy chairman of Ashtead group, the fast-growing plant hire company.

Ashtead, which began as a £458,000 management buy-out ten years ago, was floated on the unlisted securities market in November 1986 and was the last winner of the USM company of the year award. Its market capitalisation has risen from £8m to £127m and pre-tax profits have jumped from £533,000 to around £5.2m in the current year, according to some stock market estimates.

Chairman Peter Lewis, 53, who founded the company with managing director George Burnett, 46, says that the company has grown to a stage where it needs a non-executive director with "bigger company experience". Wheatley, 55, who stepped down as chairman of 3i last year, is a non-executive director of N M Rothschild, British Steel, Forte and Legal & General.

other non-executive appointments:

■ Francis Watts, a partner in Reeves & Neylan and former vice-chairman, as chairman at KENT RELIANCE BUILDING SOCIETY.

■ John Herrin, chairman of Powerpike and PRP Optoelectronics and retired md of Crystalate Holdings, at Mion Electronics, part of TUNSTALL GROUP.

■ Patrick Thomas, md of Hermes, at WILLIAM GRANT & SONS.

■ Billy Carbutt, a partner at Ernst & Young, at COMAC GROUP.

■ Peter Ward, md operations of Vickers, at BRIDON.

■ *Sir Robert Andrew* at SOUTHEND PROPERTY HOLDINGS; John Main has resigned.

■ Lawrence Ziman, senior partner of Nabarro Nathanson, at N BROWN.

■ David Bowes-Lyon, who had been responsible for Union Discount's operations in Scotland and is a director of Christie's Scotland, as chairman at AITKEN CAMPBELL on the retirement of Billy Carmichael.

■ Kenneth Baker MP and Sir David English at ENCOM, the subsidiary of Bell Canada International, Mercury Communications and Jones Intercable.

■ John Rudgard, chief executive of H.P. Bulmer Holdings, at WYEVALE GARDEN CENTRES.

George Cole as Arthur Daley in 'Minder', which leaves our screens this week along with 'Absolutely Fabulous' and 'The Man From Auntie'

Television/**Christopher Dunkley**

# Farewell to a nice little era

So – as *Private Eye's* teenage poet E.J. Thribb would say, farewell *Minder*, *Absolutely Fabulous* and *The Man From Auntie*: your catchphrases were "A nice little earner", "Be a good girl and make Mummy a capuccino" and "My name's Ben Elton good night". Thursdays won't be the same without you. True, it would be surprising if we had to wait long before Elton, now such a wholly professional comedian, was back, and the BBC people claim there will be another series of *Absolutely Fabulous* though they cannot say when. As for *Minder*, it has run for 107 episodes, and, although they have cried wolf before and then relented and given us more, it does seem as though one-off "specials" are all we shall get in future.

The days when television schedules were carved in granite and changed with the seasons just three times a year, seem to have gone for ever. Series which run for even 13 episodes, never mind 26, are now rare. Switch on ITV next Thursday at 8.30, the time when *Minder* has been going out, and you will see the first in a half-hour series called *Outside Edge*, worked up by Richard Harris from his splendid stage comedy about oddly matched couples in a cricket club. So far there are just seven episodes.

Meanwhile, if you switch on ITV at 8.30 tomorrow night, you can make an interesting comparison. Filling in for just one week is a *Minder* repeat, the first episode ever made, called "Gunfight At The OK Laundrette" (a spelling which could explain the title of Hanif Kureishi's 1985 script *My Beautiful Laundrette*). From the upbeat signature tune to the location filming of London, from the central importance of the tough Terry McCann character to the subordinate role played by George Cole's laughable Arthur Daley, this shrieks of what it actually was: an effort by the Thames TV subsidiary Euston Films to take the most notable aspects of *The Sweeney* and turn them into a vehicle for Dennis Waterman who had played the rough diamond sergeant in that police series. When you see in this first *Minder* episode armed police leaping from a Transit van, filmed from overhead, there is no mistaking the programme's antecedents.

As time went by Waterman's limitations and Cole's strengths became clear, and the centre of gravity changed. Once McCann ceased to be the flywheel of the series there was less need for violent action and *Minder* became more a comedy of manners and character. Making the last episode mirror the first, by having Arthur instead of his minder taken hostage, served to emphasise the ways in which it had evolved. On the other hand *Absolutely Fabulous* has rarely been anything more than a comedy of manners. There have been one or two powerful inventions to relish, for instance the loathing of Patsy, the sixties reprobate, for Saffron, the sanctimonious greenie teenie, a loathing which cuts right across the grain of today's adulation of yoof and environmental agonising.

However, that has been the exception, not the rule. The rule in *Ab Fab* has been a type of comedy which relies upon dialogue in a way that makes it almost as suitable for radio as for television. Interestingly, and somewhat ironically, the comedy series starring Dawn French, *Murder Most Horrid*, which now provides a comedy substitute on Thursday nights, is far more concerned with dramatic "business" and the physical aspects of comedy. (Perhaps French and Saunders could get together and pool their varied talents; what a partnership...) Unlike so many series, *Murder Most Horrid* fully justifies the phrase "situation comedy".

In the opening episode French's attempt to hang herself was interrupted by the arrival of a professional assassin intent upon killing a man in a building across the street. She fits French with a walkie-talkie and sends her across to do the dirty work, but security guards present problems. Persuaded over the r/t to offer them "blow jobs", a phrase which means nothing to her, French bumps them off one at a time in the gents. Written by Steven Moffat, this had the same sort of appeal as *A Fish Called Wanda*. Remarkably Episode 2, with a script by Paul Smith and Terry Kyan, proved equally good and just as funny, with French appearing to be the unbearably gossipy hostage of a bank robber but in the end turning all the tables.

The small spate of new series in what would once have been mid-season was swollen on Sunday night by two in succession from BBC1: yet another comedy, and yet another drama series about an oddball police detective. On the evidence of the opening episodes, they do not look likely to challenge French or Saunders for comedy laurels, or *Minder* for the qualipop drama crown. The comedy, *Honey For Tea*, stars Felicity Kendal as a drop-dead gorgeous American widow who has brought her hunk of a son, Jake, to Cambridge to inveigle him into the college funded by his late father, while wheedling herself a job in the bursar's office.

It is a good enough scenario, but Michael Aitkens, creator of the superb *Waiting For God*, has mystifyingly opted for American and British stereotypes which are two generations out of date. Silly ass Cambridge dons baffled by Americanisms went out with mortar boards: today they take their cue from David Lodge and earn fortunes on the international conference circuit. And rich Americans, raised on a PBS TV diet of British costume drama, do not split their sides at the notion of hunting anything as small as a fox.

As for *Pie In The Sky*, with Richard Griffiths as the reluctant detective who wants to leave the police and run a restaurant but is being blackmailed into staying (a thin variation on the old "one last mission" routine) we shall have to see. So far the foodie content looks more convincing than the police element, but the important question will be whether this is written from the character outwards, or is just another contrived formula: "Let's put him in a wheelchair! Oh no, *Ironside*. Well make him an antique dealer then – damn, *Lovejoy*. How about a gourmet cook? Yes, that'll do..." Still, you never know: *Minder* was produced to a formula with a purpose rather than bursting from the breast of an impassioned writer, and that lasted 15 years.

Music in London/**Richard Fairman**

# Stars in their own right

The great composers of the romantic era are fair game these days for conductors from the period-instrument movement. Twenty years ago Bach and Handel were still being played by symphony orchestras; ten years ago people argued that "authentic" Haydn and Mozart would never catch on.

Each decade the authentic brigade moves on to its next hunting ground. Norrington and Gardiner have already tackled Berlioz and Brahms, both making a particularly good job of the latter's *German Requiem*. Now Nikolaus Harnoncourt, known in his earlier days for his Monteverdi operas and Bach cantatas, has caught up with them. The enormous success of his Beethoven symphony cycle made further progress into the 19th century inevitable.

There is one big difference with Harnoncourt. When he conducts classical or romantic music he prefers to work with conventional orchestras – although he does his level best to turn them into honorary period musicians. The admirable young players of the Chamber Orchestra of Europe look wholehearted converts: the double-bass players play standing up, the timpanist sits on a low chair and the violins renounce their usual vibrato.

In Harnoncourt's hands they become a lithe, red-blooded orchestral animal, with lean strings and snarling brass, ready to pounce at their conductor's next command. There is a high quota of aggression in Harnoncourt's conducting and it made itself felt from the beginning of Friday's Barbican concert with a trenchant performance of Beethoven's *Coriolan* Overture.

There was no soloist, which may account for a disappointing audience (though a noisily appreciative one). The central work was Schumann's Fourth Symphony, so different in style from Leppard's recent Schumann cycle that regular Barbican concert-goers might have wondered if they were listening to the same composer. Where Leppard was fluent and graceful, Harnoncourt dug into the music with zealous determination.

*This is a conductor who always likes to* spring a surprise. In Brahms's First Symphony he did not drive relentlessly along, as one might have expected, but found time for relaxation as well. If the music still sounded stark, one suspects that for Harnoncourt overturning a century's tradition of glowing romantic performances is half the delight. As he raced triumphantly through the final brass chorale, the adrenalin count hit danger level. Other Brahms conductors, beware.

Education work in the community has become a prime responsibility of Britain's orchestras, but it costs money. On Monday the London Symphony Orchestra held a gala concert in aid of the LSO Endowment Fund to raise support for its education programme and invited Jessye Norman as the star attraction – a useful insurance policy if the ticket prices are going to be that high.

A solo recital on the South Bank earlier this year proved that Jessye Norman can fill a hall alone at prices most orchestras in this country would long to charge for large-scale symphony concerts. As that occasion showed, she has been adventurous in learning new music, while the spontaneity has been going out of the old. Perhaps a singer needs constant renewal as an artist to keep up the momentum.

For this concert she was joined by Colin Davis, LSO Principal Conductor elect and a long-time colleague (they share a record company). They had put together a programme equally shared between two composers, tempting speculation that each of them would excel in one half: Britten for him, Strauss for her. Of course, it never works out that simply.

Britten's late cantata *Phaedra* was written for a mezzo (Janet Baker) and has usually been sung by mezzos, but it falls very comfortably for Jessye Norman's lowish soprano. Alone of the singers I have heard in it, she experienced no strain at the top. The very fullness of the voice adds another side to the character. In some of her singing of late, the extrovert outward signs of involvement have concealed a deadness at the core, but not here: Phaedra's inner torment and shame were fully alive, the beating heart of a rounded portrayal.

There was no lack of heart in her Strauss, the closing scene from *Capriccio*. In fact, the sheer generosity of the voice and the personality was too much of a good thing. There is a cool, elegant poise written into the music of Strauss's Countess, which is smothered if the vocal line bulges with heated emotion and verbal emphasis. True Strauss stylists like Janowitz take a more refined line. Nevertheless, Jessye Norman was in lustrous voice. The star appeal still shines brightly.

In between came two orchestral items which were definitely not fillers. It is a luxury to hear the Four Sea Interludes from Britten's *Peter Grimes* played by a top orchestra and the LSO showed what a difference it makes. The partnership with Davis is promising a splendid future, his mature wisdom and their panache combining in a fine performance of Strauss's *Don Juan*. If the LSO continues to play as well as this, it can be the star in its own gala concert next time.

**LSO concert sponsored by American Airlines; it is repeated on March 17**

Ballet in Paris

# 'Etoiles' go for gold

The Paris Opera Ballet occasionally gives its brightest young dancers a run of special performances in which to show their very considerable mettle. So, at the weekend, the aspirant *étoiles*, feet as bright as their hopes, technique as burnished as their confidence in their training, made a bid for glory. It was, as always, an exhilarating spectacle. The Palais Garnier was crowded and the atmosphere charged with that special French belief in *gloire*. And on Saturday afternoon the young went for gold.

Chief ballet-master Patrice Bart centred this year's sessions around the Romantic ballet. So there was Bournonville, looking – shall we say – a bit French-polished, and evocations of Marie Taglioni's roles: the enchanting *Vivandière* sextet which has survived for a century and a half thanks to notation, and Petipa's *Paquita* trio. We saw golden gifts; we must hope for golden futures and golden rewards. Certainly the performance demonstrated the grace and security of French training – the Opera's ballet school produces superb talent year after year – and the technical and artistic assurance that the Opera engenders in its dancers.

The style is Franco-Italian, brilliant in beaten steps and turns, stylish and sophisticated as to feet – the girls have virtues in point-work undreamed of by British teaching. There is nothing unemphatic or unduly modest about what we see, and no English Missery (I'm tempted to write "English misery"). The young are there on stage because they want to succeed; failings have to do with a desire for public approval: but *regardez-moi* is not the worst of mottos. Lyricism is at a premium – a famous dancer described it to me as "dancing too slowly" – while that grandeur of scale and phrasing we admire with Russian training is largely absent.

But in matter of polish, of physical wit and clarity – the language fast, light, quickly accented – the Jeunes danseurs are a delight. I loved the sextet from *Napoli*, done with southern vivacity, and was charmed by Sandrine Henault's exquisite feet in the *Flower Festival in Genzano* duet: every step was diamond-cut. Her partner was Eric Camillo, buoyant, beautifully sure, and playing with real charm. Equally fine Bertrand Belem, who sizzled through devilish solos in *La Vivandière*, and *Paquita*, and Gil Isoart as James in the second act of *La Sylphide*. Why, conscience asks, cannot our young Royal Ballet aspirants do as well?

The Opera's other young virtuoso is Emmanuel Thibault. I reported on him last year. Slight in build, he has a technique which dazzles by its easy elegance as by its prowess. In the *Napoli* pas, and then in a fragment from *Le Papillon*, he showed a phenomenal facility – a circuit of the stage interspersing racing leaps with tight, clear pirouettes was astonishing. He is teacher's pet, seemingly able to do with grace whatever he is asked, and unspoiled and gentle in manner. He comes to life as he dances: curtain calls suggest a young man almost shy of applause.

He was partnered in *Le Papillon* by Veronique Doisneau, ideally matched with him in lightness, speed, and a sweet fragility, her dancing as effortless and beguiling as his. Very pretty, too, the sylphide sketched by Miteki Kudo, leading her James through the glens of Bournonville's second act, and turning and posing with delicious innocence. Grandly soaring was Sandrine Marache, who bounded proudly through a *Vivandière* solo. My only complaint about the performance is the fact that Anton Dolin's version of the *Pas de Quatre* in which four divinities of London's ballet in 1845 were brought together in a contest of charm and steely temperament, was lightly guyed. The steps, like the Pugni score, are pretty, and need to be prettily danced. The mock rivalries, and the mopping and mowing between Saturday's participants, was all too roguey-poguey. Real-life tensions among ballerinas who have incarnated their great predecessors have been more subtly masked and far deadlier than this warfare of pink tulle and moues.

**Clement Crisp**

*INTERNATIONAL*

# ARTS GUIDE

## ■ COLOGNE

**Philharmonie** Tonight: Wolfgang Sawallisch conducts Vienna Symphony Orchestra in Beethoven's Second Symphony and Bruckner's Seventh. *Sun afternoon: Borodin* Quartet. Sun evening: Andras Schiff piano recital. Mon: Nina Corti flamenco evening. Tues: Eartha Kitt. Next Wed: Alfred Brendel. Next Thurs: Dmitri Hvorostovsky, James Galway and others (0221-2801)
**Opernhaus** This month's repertory includes Rigoletto with Alexandru Agache and Leontina Vaduva. Harry Kupfer's production of Shostakovich's The Nose and Jochen Ulrich's choreography of Peer Gynt. Helen Donath gives a song recital next Wed, and Ben Heppner sings the title role in a new production of Peter Grimes opening on March 27 (0221-221 8400)

## ■ COPENHAGEN

**Royal Theatre** The main event this week is the first night tomorrow of a new production of Fidelio, conducted by Paavo Berglund and staged by Dieter Kaegl. Casts include Poul Elming, Tina Kiberg and Leif Roar. Repertory also includes Otello, Carmen, Helgi Tomasson's production of Sleeping Beauty and new ballets by Anna Laekesen and Laura Dean (tel 3314 1002 fax 3312 3692)

## ■ DRESDEN

**Semperoper** Tonight, Sat: La traviata. Tomorrow: Harry Kupfer's new production of Handel's Belshazzar, with Iris Vermillion and Jochen Kowalski. Fri: Salome. Sun: Der fliegende Holländer with Ekkehard Wlashicha and Reiner Goldberg. Mon, Tues: Zubin Mehta conducts Dresden Staatskapelle in Mendelssohn's Octet and Mahler's First Symphony (0351-484 2323)
**Kulturpalast** Sat: Wolfgang Sawallisch conducts Vienna Symphony Orchestra in Beethoven's Second Symphony and Bruckner's Seventh. Sun (Schloss Albrechtsberg): members of Dresden Philharmonic play chamber music by Sutermeister, Mahler, Haydn, Busoni and others (0351-486 6666)

## ■ FRANKFURT

**Alte Oper** Tonight: I Musici di Roma play baroque concertos. Sat: Mikis Theodorakis presents an evening of his own music. Sun morning, Mon evening: Emmanuel Krivine conducts Frankfurt Opera Orchestra in works by Blacher, Prokofiev and Franck, with violin soloist Midori. Mon (Mozart Saal): Nathalie Stutzmann song recital. Tues: Dirk Joeres conducts West German Sinfonia in Saint-Saens, Mozart and Brahms, with clarinet soloist Eduard Brunner. Next Wed: Lorin Maazel conducts Bavarian Radio Symphony Orchestra (069-134 0400)
**Oper** Tonight, Fri, Sun: Sylvain Cambreling conducts Herbert Wernicke's new production of Duke *Bluebeard's Castle, with Henk Smit* and Katherine Ciesinski. Tues: Ensemble Modern plays works by Webern (069-236061)

## ■ GOTHENBURG

**Konserthuset** Tonight: Iona Brown directs Academy of St Martin in the Fields. Fri evening, Sat afternoon: Jun'ichi Hirokami conducts Gothenburg Symphony Orchestra in works by Verdi, Sandström and Delibes, with trombone soloist Christian Lindberg (031-167000)

## ■ HAMBURG

**Staatsoper** This month's repertory includes a Ring cycle conducted by Gerd Albrecht, with Gabriela Schnaut, Simon Estes and Siegfried Jerusalem in leading roles, and a new production of Henze's Die Bassariden, staged by Christine Mielitz and conducted by Markus Stenz. Dmitri Hvorostovsky gives a song recital next Mon (040-351721)
**Musikhalle** Tomorrow: Wolfgang Sawallisch conducts Vienna Symphony Orchestra in Beethoven's Second Symphony and Bruckner's Seventh. Fri: Alfred Brendel plays Beethoven piano sonatas. Mon: B.B. King. Next Thurs: Andras Schiff (040-354414)

## ■ HELSINKI

**Finnish National Opera** Tonight, Sat, Tues: Otello. Tomorrow, Fri: new Stravinsky ballet programme, including world premiere of Jorma *Uotinen's Petrushka. Sun afternoon:* Academy of St Martin in the Fields (0-4030 2211)

## ■ LEIPZIG

**Gewandhaus** Tonight: Udo Zimmermann conducts MDR Chamber Philharmonic in official opening concert of 1994 Leipzig Book Fair. Tomorrow, Fri: Marek Janowski conducts Gewandhaus Orchestra and Chorus in works by Schnittke, Mozart and Beethoven, with piano soloist Lars Vogt. Sun evening: Gewandhaus Quartet plays string quartets by Haydn, Mendelssohn and Beethoven. Mon: Thomas Zehetmair is violin soloist with Amsterdam Bach Soloists (0341-713 2280)
**Opernhaus** Fri: Lothar Zagrosek conducts revival of Ruth Berghaus' production of Jörg Herchet's 1993 opera Nachtwache. Sat: two ballets by Uwe Scholz. Sun: Fidelio. Next Tues: Scholz's version of Coppelia (0341-291036)

## ■ LYON

**Opéra** Tonight, Fri, Sun: Neville Marriner conducts concert performances of Mozart's Il re pastore. Next Tues: first of eight performances of ballet mixed bill featuring choreographies by Bill T. Jones, Stephen Petronio and Susan Marshall. March 24: Kent Nagano conducts Debussy and Ravel. March 30-April 3: Pina Bausch Tanztheater Wuppertal (tel 7200 4545 fax 7200 4546)
**Auditorium** Tomorrow, Sat: Peter Csaba conducts Orchestre National de Lyon in works by Schumann and Liszt (7860 3713)

## ■ MARSEILLE

**Opéra** Tonight, Fri, Sun afternoon, next Wed: John Burdekin conducts Alain Marcel's new production of Lalo's Le Roi d'Ys, with cast including Nadine Denize, Alain Fondary and Luca Lombardo (9155 0070)

## ■ MUNICH

**Staatsoper** The main event over the coming week is the première on Mon of Richard Jones' new production of Giulio Cesare, conducted by Ivor Bolton, with a cast headed by Ann Murray, Kathleen Kuhlmann, Trudeliese Schmidt, Pamela Coburn and Christopher Robson. Repertory also includes Lady Macbeth of Mtsensk, Der fliegende Holländer and Peter Wright's production of Giselle. There are performances of Die Meistersinger von Nürnberg on March 25, 28 and April 4 (089-221316)
**Gasteig** Tonight: an evening with Peter Ustinov. Tomorrow, Fri: Lorin Maazel conducts Bavarian Radio Symphony Orchestra in works by Berlioz, Weber and Bartok. Sun: opera concert with Munich Radio Orchestra and vocal soloists. Mon: Franz Welser-Möst conducts London Philharmonic in Haydn, Schumann and Shostakovich, with piano soloist Mitsuko Uchida (089-4809 8614)

## ■ OSLO

**Konserthus** Tonight, Fri: Nello Santi conducts Oslo Philharmonic Orchestra and Chorus in a concert performance of Bellini's Norma, with cast including Monica Pick-Hieronimi and Bonaldo Giaotti. Tomorrow: Iona Brown directs Academy of St Martin in the Fields in works by Britten, Mozart, Penderecki and Haydn (2283 3200)

## ■ STOCKHOLM

**Konserthuset** Tomorrow: Roland Pöntinnen piano recital. Tues: Barbara Hendricks song recital. Next Wed, Thurs: Academy of St Martin in the Fields (08-102110)
**Royal Opera** Sat: song recital by Helena Doese, accompanied by Geoffrey Parsons. Repertory includes La boheme, Suppé's operetta Boccaccio and Natalia Makarova's production of La Bayadère (08-248240)

## ■ STUTTGART

**Staatstheater** Tomorrow, Sun, next Thurs: Philippe Auguin conducts *revival of Götz Friedrich's production* of Der Rosenkavalier, with Ellen Shade and Helmut Berger-Tuna. Fri: Marcia Haydée's version of Glazunov's ballet Raymonda. Sat, next Wed: Achim Freyer's production of Der Freischütz. Tues: Johannes Schaaf's production of Rigoletto, with Wolfgang Schöne in title role (0711-221795)

### ARTS GUIDE

**Monday:** Berlin, New York and Paris.
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**Thursday:** Italy, Spain, Athens, London, Prague.
**Friday:** Exhibitions Guide.

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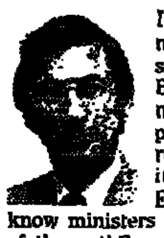
## Ian Davidson

# Futile and flawed

### The UK cannot impose its vision of Europe on its EU partners



*It is hard to make strategic sense of the British government's campaign to restrict majority voting in Europe.* Yes, I know ministers are frightened of the anti-Europeans in their party; and presumably they hope to appease them with a vigorous stand in defence of national sovereignty. But the problem is that this is a crusade which is certain to fail in the medium term, and probably in the short term as well.

In any case, why go out on a limb now? The Maastricht treaty was such a miserable experience for Mr John Major that you would think the prime minister would do his best to steer clear of all questions of principle about Europe and its development for as long as possible. Yet here he is, taking a combative stand on an issue which is bound to involve a battle on two fronts: it must lead to an unwinnable confrontation with his partners in Europe, but it must also stir up the anti-European campaigners among those who are nominally his own supporters. This is a spectacular exercise in political masochism.

This crusade is doomed to defeat, because its underlying objectives set the UK at odds with virtually all its European partners. The government pretends that it is only asking that the voting rules which protect blocking minorities in the Council of Ministers should be kept at the present level, even after the admission of four more member states: 23 votes, or the equivalent of two big countries and one small.

The reality, of course, is that the British government is trying to make majority voting more difficult than at present; whereas effective decision-making in a larger Union will obviously require *more* majority voting, not less.

The puzzle is that the Conservative government seems to have been manoeuvred by its Euro-phobic wing into refighting the last war but one. The windmill it is tilting at is the old fantasy that Britain's national sovereignty is threatened by the sinister federalists in Brussels; and it appears to imagine that it can creep by stealth back in the direction of a national veto. It does not seem to realise that the terms of the debate have been changed beyond recognition.

Many years ago, in 1965-66, the Community had a shattering confrontation between France and the rest, over the rights and wrongs of majority voting. That was before majority voting was due to come into force as part of the Community's normal regime, and the French were trying to prevent it happening. After a six-month confrontation, a truce was signed in 1966 which was afterwards called the Luxembourg Compromise, even though there had been no compromise on anything. Nevertheless, the psychological shock of the crisis effectively deterred majority voting for 20 years.

**It is perhaps slowly dawning that the opt-out is not a satisfactory type of solution**

But the Luxembourg Compromise was wiped off the slate by the 1986 Single European Act, which explicitly broadened the scope for majority voting; and the agenda on the slate was rewritten by the Maastricht treaty, which also carried the majority voting trend even further.

As a result, today's central question about majority voting is the reverse of yesterday's: it is not whether a member state can be compelled by majority vote to do things it would rather not do, but whether it can use its national veto to prevent most or all of its partners from doing what *they* collectively want to do.

It is now clear that the first, old-fashioned question can have several different answers. Most rational people now recognise that the purpose of majority voting is not to outvote the recalcitrant, but to persuade them to negotiate and to compromise. But for those who will not negotiate and will not submit, there is the alternative of the opt-out: if you don't like the journey, you can leave the ship.

That was the double lesson of Maastricht: the other member states could not compel the UK to accept the social chapter, or the Danes to accept monetary union or indeed anything else in the treaty; but nor, in the last resort, could Britain and Denmark prevent the others from going ahead with the treaty they had compromised on. In the long run, the majority will get the kind of Europe they want, and the options for those who disagree will essentially be quite simple: to compromise, to submit, or to stand aside. If majority decisions are blocked inside the Council of Ministers, through systematic legal obstruction, they will be taken outside, in some other way.

If the British government is now trying to strengthen the *legal* methods of obstruction, it is perhaps because it is slowly dawning that the opt-out is not a satisfactory type of solution.

The plan for economic and monetary union may well prove an acute test case, and it is likely to come to a head during the 1996 Inter-Governmental Conference to review and revise the Maastricht treaty. At that moment, it will be clear which member states are still committed to monetary union. And it is quite possible that an inner core will be ready to go ahead to a single currency, conceivably in a very near future. Mr Major will then be left holding his opt-out, which means he cannot stop them, just as it means he cannot join them.

Note that the concept "blocking minority" does not exist in any European treaties. What they lay down is the number of *positive* votes required to pass a measure: at present 54 out of 76. The underlying assumption is that the governments which signed the treaties share a broad political consensus on the purpose of their association. That consensus did not exist in 1965. But the French lost that battle for one simple reason: they could not impose their view of Europe then, and it is time the British saw that they cannot impose their view of Europe now.

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### Is bigger better in the global business travel industry, ask **Michael Skapinker** and **David Buchan**

# Essential, or just extra baggage

If employees of Foseco, the Birmingham-based metallurgical company, try to book business class tickets when they should be flying economy, Wagonlit Travel will let Mr John Lamb know.

Mr Lamb, Foseco's chief accountant, says the company's contract with Wagonlit gives it far greater control over business travel costs than it could ever achieve alone.

Wagonlit's technology enables Mr Lamb to obtain, at 24 hours' notice, a computerised record of where employees have travelled recently and whether they got the best deal available. If they have not, he asks them why.

Wagonlit, which is part of Accor, the French hotel and catering group, yesterday announced details of its plan to combine its business travel interests with those of Carlson of the US to create a worldwide network with combined revenues of \$10.8bn, operating from 4,000 locations in 125 countries.

Two main competitors, American Express and Thomas Cook, each operate from about 2,000 locations - either their own offices or those of client companies.

The two sides in the partnership said the new company, Carlson Wagonlit Travel, aimed to "service the growing needs of the global business traveller, to market the new brand worldwide, develop new global business travel technology and pursue immediate expansion into new business markets throughout the world, in particular the Asian and Pacific regions".

Mr Curt Carlson, the founder of the Carlson empire, says the combined travel company will be able to improve services to clients such as General Electric, which places its \$350m-a-year travel business with Carlson in Phoenix, Arizona.

Mr Carlson, whose company's other interests include Radisson Hotels and TGI Friday's restaurants, which are not part of the merged venture, says: "Big companies often have difficulty with their travel, operating in new countries where agencies often just speak the local language and airlines use different [ticket] codes."

Carlson will contribute its strengths in the US to Wagonlit's strong position in Europe. The newly-merged company will invest an initial \$40m in setting up or buying agencies in Asia, the Pacific region, Latin America and Africa, where it is under-represented.

Why did they choose each other? Mr Hervé Gourio, president of Wagonlit Travel, says: "Carlson is the best partner for us because we are about the same size in the travel business and at the group level. Neither is predominant, European or American."

Mr Travis Tanner, president of Carlson Travel, promises "a real working union to create the number one in business travel. Not a paper partnership, nor a smoke and mirrors arrangement." He said Carlson "needed a prominent position in Europe - to have done it ourselves would have taken a great deal of time and money".

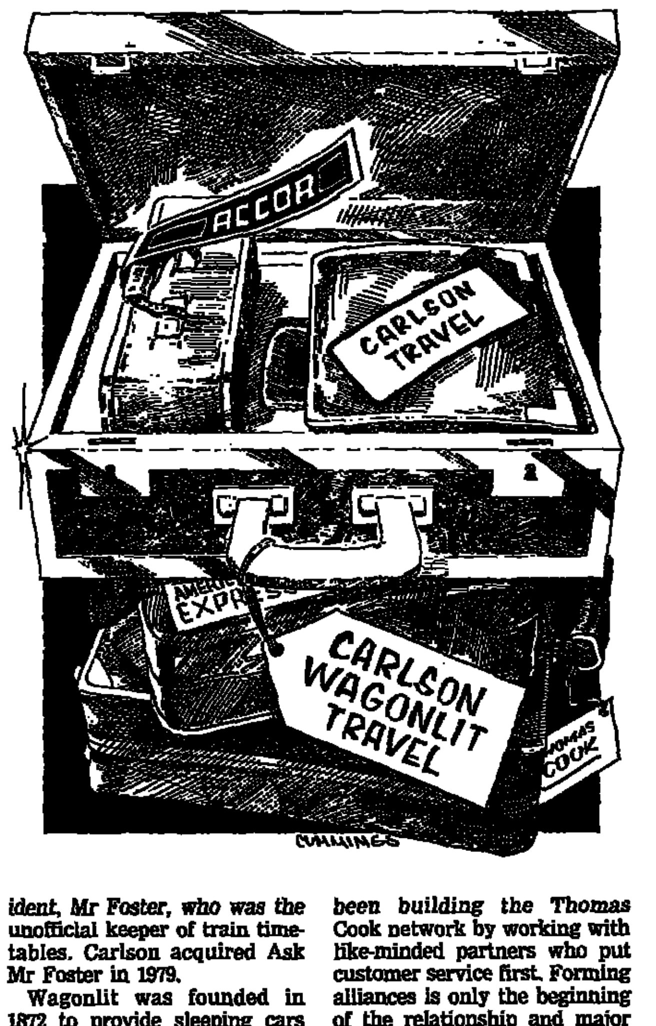
Rivals in the industry, however, were quick to cast doubt on the prospects of merging two organisations with such different cultures. "This is not a marriage made in heaven," said one rival business travel executive. "I can't see the Americans being run by the French, or vice-versa."

The new company will have two chairmen, one from Carlson and one from Wagonlit, and two chief executives, also one from each side. Although the company headquarters will be in London, the two sides said "daily operations will be co-ordinated from Minneapolis and Paris respectively".

Carlson, one of the largest privately-owned groups in the US, is seen in the travel industry as run with a firm hand from its Minneapolis headquarters. Wagonlit, which has gone through a series of changes and acquisitions, is regarded as still formulating its culture.

Accor acquired Wagonlit, which had taken over the UK business travel interests of Pickfords, in 1992. The company was then called Wagons-Lits, but changed its name to Wagonlit last year to distinguish itself from Accor's railway services division, which still uses the old name.

The planned new company brings together some of the oldest names in the travel business. Carlson's travel business began as the Ask Mr Foster travel agency in St Augustine, Florida, in 1888, making it the oldest travel agency in the US. Its name came from a local resident, Mr Foster, who was the unofficial keeper of train timetables. Carlson acquired Ask Mr Foster in 1979.




Wagonlit was founded in 1872 to provide sleeping cars for overnight travellers on European trains. In 1928 it set up travel agencies in rail ticket offices throughout Europe.

For over 60 years, Wagonlit had an alliance with Thomas Cook. The thinking behind the tie was that Thomas Cook's strength in the old British Empire would complement Wagonlit's power in continental Europe. The link was dissolved in 1989.

In a pointed statement yesterday, Mr Christopher Rodrigues, Thomas Cook's chief executive, said: "Since we decided to sever our relationship with Wagonlit, we have been building the Thomas Cook network by working with like-minded partners who put customer service first. Forming alliances is only the beginning of the relationship and major industry players such as ourselves will be watching the progress of this alliance with interest. However, it will be customers who will judge its real value."

Not all Wagonlit's customers see merit in the merger or in the idea that companies need a single business to handle their travel requirements worldwide.

Mr Lamb says Foseco does not even have the same travel agents as Burmah Castrol, its parent company, which uses Thomas Cook. Foseco was already using Wagonlit when it was acquired by Burmah Castrol in 1990. Although the company asks different agencies to bid for its travel account every two or three years, it has seen no need to abandon Wagonlit, which has two staff members based at Foseco's premises.

Mr Lamb says that Foseco and Burmah Castrol did decide jointly to seek discounts from airlines as their larger combined purchasing power enabled them to get a better deal. They have investigated using a single travel agency throughout the group, but decided there were no similar savings to be made. The larger combined purchasing power would not have yielded bigger discounts.

Mr Lamb believes there are advantages to having two travel agencies working for different parts of his group. He says: "We believe it keeps both of them on their toes."

Mr Lamb is sceptical of the claim that combining Wagonlit with Carlson will enable the combined group to deliver a more competitive service. He says: "My answer to that is: if getting much bigger means you can purchase so much more efficiently, kindly tell us how much that's going to benefit us in discounts."

The proposed merger does have its champions, however. Mr Andrew Solum, travel manager of Inmarsat, the international satellite organisation, which is also a Wagonlit customer, says it should bring significant benefits.

After taking on Wagonlit last year to handle travel arrangements from its London headquarters, Mr Solum was sufficiently impressed to ask them to do the same for Inmarsat's offices in Princeton, New Jersey. Six weeks ago, the organisation opened an office in Beijing, where Wagonlit is not represented. Mr Solum hopes the planned merger will enable Carlson Wagonlit Travel to open an office there.

He says the idea of a global travel agency network is more than mere hype. If his organisation's employees are bumped off flights in different parts of the world, he says a call from Wagonlit to the airline often gets them back on the aircraft. The wider a travel agency network's reach, the more places there are where it can perform such services.

He says: "Wherever you are in the world, if you've got a Wagonlit ticket, you can go into a local office if you've got a problem. You've got somewhere to go if you've been robbed."

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# LETTERS TO THE EDITOR

Number One Southwark Bridge, London SE1 9HL

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## Appearance is not everything

*From Mr Derek C Jenkins.*

Sir, Colin Amery ("A lifeline for the South Bank", March 14) falls into the trap which catches so many of those who write about architecture - he assumes that external appearance is everything. In praising the Festival Hall, while damning the Queen Elizabeth Hall and Hayward Gallery, he takes no account of the ability of each building to fulfil its true function successfully.

In the ways in which a concert hall can enhance a musical performance and its enjoyment, by the musicians and audience, the RFH is the worst venue, not just in London, but in all the main centres in Europe. The QEH, on the other hand, ranks with the Wigmore as the best in this respect.

Among galleries, the Hayward exhibition space complements 20th century works in a way that is matched by no other leading London site. To suggest that buildings do not fulfil their real purpose superbly, merely because a vocal section of opinion deems them to be ugly on the outside, is a very poor application of values and priorities.

Derek C Jenkins,
*41 Spice Court,*
*Asher Way,*
*London E1 9JD*

## Heading down unhealthy path

*From Mr Alan Beith MP.*

Sir, Alison Smith's report, "Building societies aim to shake off shackles" (March 10), underlines the hostility of some building society executives to any form of accountability to their members, whose capital they manage.

When I raised this issue of accountability in a speech to the Building Societies Association a few months ago, I received an intriguing mixture of public criticism and private support. The leading article in Mortgage Finance Gazette asserted in reply that society boards and the Building Societies Commission should take active steps to prevent the election as directors of people not chosen by the current directors, and questioned "whether mutuality meant anything more than not being required to pay shareholders dividends".

The government even suggests that building societies, which constantly mail advertising material to their members, should be relieved of the burden of notifying them by post of their voting rights at the annual general meeting. Some people in the industry do recognise that a complete absence of accountability, even if regulation became more effective, would be extremely unhealthy. However, that is the way things are heading.

Alan Beith,
*Liberal Democrat deputy leader and Treasury spokesman,*
*House of Commons,*
*London SW1A 0AA*

## Why Wales resists change

*From Josephine Farrington.*

Sir, I read with interest Philip Stephens' article, "PM urged to shelve radical plans" (March 14), on growing pressure for the government to delay implementing local government reorganisation in England until after the next general election. I hope the same "consolidators" to whom he refers will also press the prime minister to drop the unpopular proposals for changing Welsh local government.

Only one in five in the principality supports the government's plans to establish 21 so-called unitary authorities at a cost of £201m. If the people of Wales, members of the Confederation of British Industry, Trades Union Congress, voluntary organisations and the overwhelming majority of Welsh MPs oppose this proposal, how can English MPs justify forcing it on them? They could not have sent a clearer message to Whitehall. For a government that claims to want to listen to the people, it is certainly keen to ignore the wishes of the Welsh. They have not been given an independent commission to examine council structure.

We can only hope the same ministers now making such pragmatic noises about reforming English local government will speak up for Wales.

Josephine Farrington,
*Eaton House,*
*66a Eaton Square,*
*London SW1W 9BH*

## Scottish salmon competitive

*From Mr Jim Payne,*

Sir, In the letter "Scottish salmon also subsidised" (March 14), Mr Roderick Thomas wildly exaggerates the level of support which has been received by the Scottish salmon farming industry. Moreover, in every case, any support for the industry has been completely in accordance with European Union rules.

Contrary to what he states, Norway has no natural advantages over Scotland for growing salmon. This is why the performance of Scottish farms is now as good, or possibly better, than those in Norway.

There is no truth in the statement that Norwegian salmon farms are profitable at a price of 20 per cent to 30 per cent lower than the cost of production in Scotland. The most careful analysis reveals that costs of production are roughly comparable in both countries.

Mr Thomas is also wrong about the threat from Chile. Chile can compete only in Europe on frozen salmon. The freight cost for fresh salmon from Chile to Europe makes that business uneconomic. Otherwise, of course, there would be fresh salmon arriving in Europe now, at a time when the Chileans are vigorously searching for new markets.

Jim Payne,
*chairman,*
*Scottish Salmon Growers Association,*
*Drummond House,*
*Scott Street,*
*Perth PH1 5E1*

## Time for minister to speed up the search

*From Mr J M L Stone*

Sir, Mr John Gummer, the environment secretary, has called for councils to handle standard enquiries "within 10 working days" ("Quicker land searches urged", March 12).

In the last years of the 20th century this is an absurd call. Mr Gummer should seek to ensure, as a matter of urgency, that the whole of the conveyancing process should become a real-time screen-to-screen process. The hardware, the software and the technical know-how to effect this are all immediately available to his department. At a stroke, conveyancing could, if the will were there, become a fast, efficient and cheap process which would benefit 99 per cent of the nation at the expense of 1 per cent (the lawyers).

J M L Stone,
*chairman,*
*Property Intelligence,*
*13-15 John Adam Street,*
*London WC2N 6LD*

## Not a recent change in English company law

*From Mr E A Coleman.*

Sir, Mr Jean Thibaud's article on recent developments in French banking and company law was most informative (Business and the Law: "Overthrow of ancien régime", March 8).

Allow me, however, to correct what appears to be an inaccuracy in the article. Mr Thibaud states, in the fourth paragraph, that "England has recently accepted netting [ie. set-off] as a basic principle of insolvency law...". In point of fact, bankruptcy/insolvency set-off has been the rule in England since the time of Queen Anne (see s.11 of 4&5 Anne c.17), if not before (see s.2 of the 1570 statute, 13 Elizabeth, c.7).

Perhaps Mr Thibaud's reference to a "recent" acceptance of netting in England was a reference to the (somewhat belated) recognition by the financial law panel of the principle of insolvency set-off (see the panel's guidance note on netting of November 19 1993).

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**FINANCIAL TIMES**

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Wednesday March 16 1994

# Summit for good jobs

The jobs summit in Detroit was never likely to come up with exciting new solutions. What it could do was register agreement on the importance of the topic and indicate the nature of the emerging consensus on what to do about it. This the summit has done. In breaking new ground for the discussions among the group of seven industrial countries, it may even have given that intellectually moribund body new life.

Not that the G7's familiar macroeconomic disharmony was entirely absent. One of the recurring *leitmotifs* of its two decades has been the US effort to persuade the Germans to adopt more expansionary policies. The jobs summit was partly an imaginative new way to achieve that old objective. The pitch adopted by US labour secretary, Robert Reich, was that "cyclical unemployment which persists may turn into structural or classical types of unemployment, which are more difficult to address". The argument is correct, but it cuts two ways. Rising inflation must also be avoided, because it leads to recession as surely as night follows day. It is not clear that the Clinton administration understands this point.

If a transatlantic consensus on macroeconomic policy is lacking, the agreement elsewhere was encouraging. The summit has, for example, rejected protection against imports and embraced innovation, rightly so, in both cases. Labour intensive imports and new technology will make industrial countries richer. But, as Mr Reich observes, they also exact a price. "The primary structural labour market problem," he notes, "is a shift in relative labour demand against less-educated workers and those doing routine tasks and towards workers with problem solving skills."

## Increased inequality

In the US, the result has been increased inequality, with workers in the higher earnings bracket enjoying a 4.4 per cent increase in real wages over the past 20 years, while those on the bottom suffered a 10.3 per cent real decline. Because there was no overall real wage growth, US employment also grew by some 40 per cent. In continental Europe, by contrast, average real wages grew rapidly over the past two decades – by 76 per cent in France and 43 per cent in Germany. There was also very little increase in pay inequality. But these countries enjoyed virtually no employment growth, while unemployment rose, cycle by cycle.

The question then is not whether jobs can be created. It is obvious that they can be. The question is whether those new jobs can be combined with sustained rises in average real wages and the pay equality to which Europeans, in particular, are attached. The challenge is not just more jobs; it is "good jobs" for everyone.

## Holy grail

Secretary Reich's own suggested solution is the trio of European-style education and training, US-style labour market flexibility and expansionary macroeconomic policy. So is this the holy grail for jobs? Only up to a point, Mr Reich.

Yes, education and training matter, but high-quality basic education matters most, a policy that may never work for all and certainly will not act quickly. Yes, labour market flexibility is essential, but this is a euphemism for policies that will lower the relative and quite possibly the absolute real wage of the unskilled, precisely what Europeans – and increasingly Americans – find objectionable. And yes, macroeconomic policy must accommodate growth, but even Padraig Flynn, European commissioner for employment, agrees that "there is a new conventional wisdom that cyclical recovery will not be the way out".

There is room for a great deal of imaginative new thinking of the kind contained in a new pamphlet from the London-based think-tank Demos on "the end of unemployment". But at the heart of that thinking must be ways to lower the cost of hiring new employees. If at the same time rewards are to be sustained, large employment subsidies for the unskilled will be required, instead of the taxes often imposed upon them. But that would necessitate higher taxes elsewhere. Combined with subsidies for training and radical labour market deregulation, this is the only policy likely to put industrial countries on the path they are apparently seeking.

# Better fewer but better

There is growing concern at Westminster over the way that legislation is drafted and passed. On Monday, Mr Howard Davies, director general of the Confederation of British Industry, added the voice of the business community to such worries. In a speech at the European Policy Forum, he called for an overhaul of the legislative process, with more consultation, better drafting and improved scrutiny.

The case for reform is strong. The weight of legislation is growing – this year's Finance Bill, at 471 pages, is the longest in history. Yet an increasing amount of time is spent on remedying the defects of recent legislation. Last year's Criminal Justice Act repealed sentencing reforms introduced in the 1991 Act. A one-clause bill is needed to restore the powers of transport police, inadvertently watered down in last year's rail privatisation act.

A telling indicator of the need for change is the growing number of amendments the government has to table to its own legislation in the Lords. These have more than doubled during the 1980s according to evidence submitted by Lord Howe to the Hansard Society commission on the legislative process which reported last year. The late drafting and tabling of amendments inevitably makes parliamentary scrutiny less thorough. It also makes it harder for business and other organisations to make an informed contribution towards shaping legislation.

## Drafting quality

Some of the blame for this has been laid at the door of the parliamentary counsel who draft legislation. The European Policy Forum has recently suggested breaking their monopoly to improve the quality of drafting. Involving outside lawyers in the work would allow departments access to a larger pool of talent. Contracting-out would also force departments to define their objectives clearly and devise reasonable timetables that legal firms could work to.

However, it is not bad drafting which has led to repeated amendments to the Police and Magistrates Courts Bill currently passing through the Lords. It is the failure of the home secretary Mr Michael Howard to convince peers of the wisdom of centralising control over the police service. Mr John Patten, education secretary, has also had to concede amendments to his Education Bill to address scepticism over his proposals to curb student unions and to allow schools to control teacher training. Better drafting could improve the quality of legislation – but ministers have much more to contribute.

## Ministerial machismo

Too much legislation is rushed through parliament too hastily. In some cases, this is to deal with political crises such as a surge in joy-riding or a spate of attacks by dangerous dogs. But in most cases, it is ministerial machismo which sees pushing through radical reforms as the best way to climb the greasy pole. Frequent ministerial reshuffles encourage this belief, since ministers move on before the trouble they have created manifests itself.

A more serious approach to consultation on contentious changes in the law would help counter such tendencies. Mr Davies says that some departments consult business in "an unsatisfactory or perfunctory way". He cites the Home Office failure to consult on fire safety regulations, scrapped only after direct intervention by the CBI. And just three weeks was initially given for comments on complex proposals to reform pensions law issued in January. Ministers should give adequate time for consultation and report more fully on the outcome.

Another useful step would be to limit the number of contentious pieces of legislation passed in each session. This would allow more time for legislative "housekeeping", such as legal reforms drafted by the Law Commission. Uncontroversial measures needed by business such as amendments to the Sale of Goods Act, legislation on the Privity of Contract and a new Restrictive Practices Bill have all been ready for years but denied parliamentary time.

There are other measures that could improve the legislative process, such as creating two finance bills to separate technical tax changes from more radical policy changes. But the key to better legislation is have less of it, and do it better.

# More flexible, and less arrogant friend

**Alan Cane** examines the outlook for a UK-based computer company in a cut-throat marketplace

International Computers, the UK-based computer company, used to epitomise arrogance and insularity. Even "International" in the company's name begged an invidious comparison with International Business Machines, the world's largest computer company.

Stories of its conceit abounded. The chief salesman for a region, it was said, would put up in the best hotel and announce he would be available that evening in the parlour to take customers' orders for computers.

Since its acquisition, first by the UK telecommunications company STC in 1984 and then by Fujitsu, Japan's leading computer maker, in 1990, that arrogance has evaporated. "Today we are humbler and nimbler," says Mr Peter Bonfield, ICL chairman and chief executive.

Mr Koshiro "Kit" Kitazato, Fujitsu's man in ICL's headquarters in Putney, west London, is charged with co-ordination between the Japanese computer giant and its UK-based subsidiary. He says ICL has learnt reliability from Fujitsu, while Fujitsu has learnt flexibility from ICL.

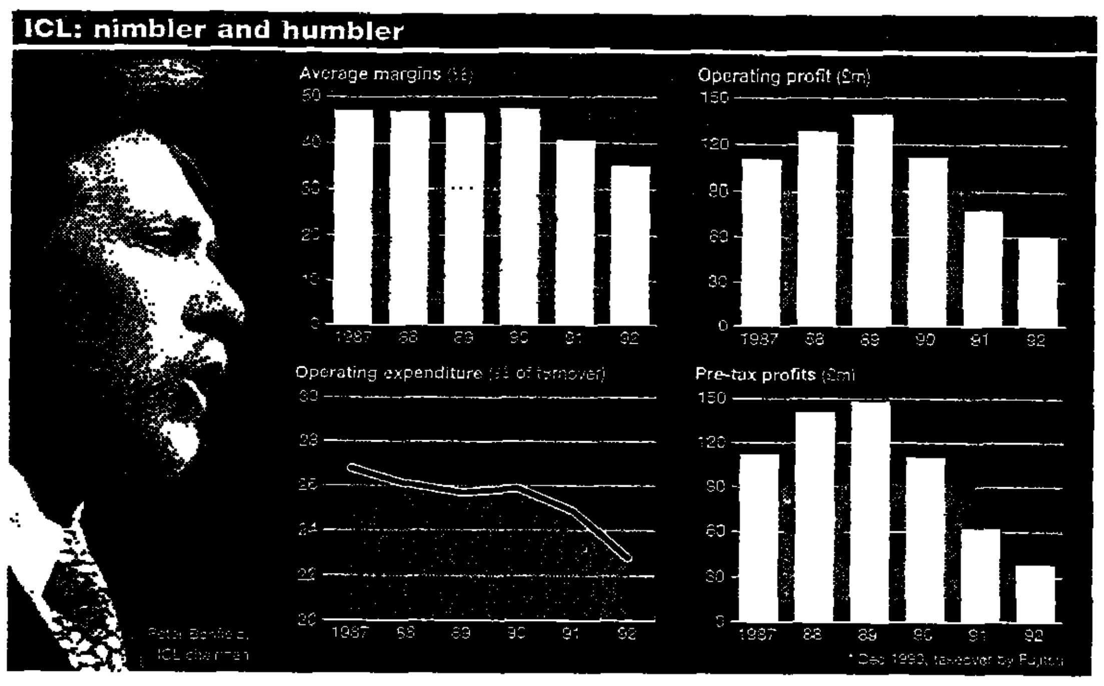
Fujitsu set several strategic objectives at the time of the takeover. ICL would be autonomous, operating at arm's length from its parent. It would retain its European base, seek maximum commercial co-operation with Fujitsu and, eventually, float on the London Stock Exchange.

The first few conditions have been fulfilled; the recession has delayed the flotation. Both companies agree they should work more closely together to share research and development, and marketing costs.

There have been some positive developments: ICL's new mid-range computers are the first to be sold under the two companies' names; a pioneering trainee exchange scheme is under way; the two groups are collaborating on check-out systems for supermarkets; ICL's office software has been rewritten to be marketed in Japan.

Despite these achievements, ICL's 1993 results, scheduled for release today, will not be exciting. Turnover will be higher than last year's £2.5bn, but pre-tax profits are expected to be well below the £38.6m recorded for 1992. Profitability has been on the slide since 1989, when ICL made £148.6m before tax. The 1993 figure represents little more than break-even, though it is respectable in an industry undergoing global restructuring.

ICL's top management is taking steps to safeguard the group's profitability. Earlier this year, the company raised £100m through a rights issue wholly taken up by Fujitsu – the first time the UK company had turned to its parent for funds.




The issue reflects the group's pessimism over short-term prospects in the computer marketplace, as the industry moves towards low-cost, low-margin operating systems based on common standards.

Cash is one bulwark against a highly competitive market; an increasingly efficient and lean operation is another. Mr Bonfield points to the steady decline in the group's overheads. In 1987 operating expenses as a percentage of turnover were 26.8 per cent; in 1992 the figure was 22.8 per cent and it is expected to have fallen further in 1993. The company employs about 25,000 and is cutting jobs at about 5 per cent a year.

The reason for ICL's drive for economies is the relentless decline in gross profit margin. Standing at 47 per cent in 1987, it is now less than 35 per cent as the shift to lower-cost systems continues.

Nevertheless, ICL remains the only consistently profitable broad-based computer manufacturer headquartered in Europe; worldwide, it is one of the few traditional computer companies not floundering in red ink. By comparison, Siemens Nixdorf of Germany and Olivetti of Italy are losing money; and Groupe Bull of France is dependent on repeated restructuring grants from the French government.

Mr Bonfield's reputation is high, both with Fujitsu and the industry at large. He was recently asked by Mr Martin Bangemann, European Union commissioner for industry and telecommunications, to join the High Level Group on Information Technology, set up to consider the impact of information technology on Europe. This is an indication that ICL has restored its Euro credentials after being bundled out of high-level European policy meetings following the Fujitsu takeover.

But restoring adequate profitability has proved more difficult. Though it still manufactures mainframe computers, more than 50 per cent of ICL's revenues come from the services sector. Competitors now include services companies, such as Electronic Data Systems (EDS), and personal computer makers, such as Compaq, as well as its traditional rivals, IBM, Unisys and Digital Equipment.

According to Input, a US consultancy which tracks the computing services business, ICL's improvement in market share in services ranks it fourth in Europe behind the US companies Microsoft, Andersen Consulting and EDS.

The company has been split into 26 semi-autonomous businesses, each with profit and loss responsibilities. There are three groups:

- industry systems, including countries such as France and Portugal, under Mr Richard Livesey-Haworth;
- services, including Workplace Technologies and Sorbus Europe, the maintenance company ICL owns with Bell Atlantic, under Mr Paul Whitwam;
- and technology businesses, exemplified by Design to Distribution, ICL's manufacturing consultancy, under Mr Ninian Eadie.

These changes, made over the past year, are evidence that the company is going through a second significant restructuring. The first took place more than a decade ago when, under Mr Robb Wilmot, ICL forged a technological alliance with Fujitsu and pioneered the shift to standard systems. That was when ICL abandoned cherished notions of setting the technological agenda and accepted that it would have to buy its technology from the best sources. Despite what many saw as the dead hand of STC, ICL prospered during the buoyant economy of the late 1980s.

Both ICL and STC were aware, however, that the company needed an owner with deeper pockets and greater commitment to the information technology business than STC. The solution proved to be Fujitsu. It bought the company just before the US and western Europe moved into recession. At the same time, the cost of computer hardware fell precipitously, helped by a fierce price war between personal computer manufacturers.

ICL's survival is a consequence of a flexibility uncommon in large companies: "In storms we are quite quick up the rigging, even if the planks are leaking," Mr Livesey-Haworth says wryly.

Much of this flexibility comes from a trio of acquisitions: Datachecker, a US retail automation company which is the cornerstone of ICL's ambitions as a global retail systems company; Nokia Data, the Finnish personal computer company, which ICL bought in 1992; and Technology, the UK's largest personal computer distributor.

Datachecker, as ICL's senior managers recall, was a case study in how not to manage an acquisition. The company sent in its own manager and accountants who ran rough-shod over local management. Sensitivities were bruised, so the assimilation took longer and cost more than envisaged.

When ICL acquired Nokia Data, it was determined not to make the same mistake. PC operations were consolidated in Scandinavia. The chief impact, however, was cultural, a pattern repeated with the acquisition of Technology. "We needed a shot of the faster-moving PC culture," Mr Eadie says.

So what is ICL's future? It is likely to remain medium sized; it is unlikely to make more money this year than in 1993, as Mr Bonfield sees no improvement in the market. He believes, however, that ICL's reorganisation will be complete this year. Largely freed from debt through the rights issue and from restructuring charges, the company should return to significant profitability in 1995, he predicts. This could mean profits eventually reaching 5 to 6 per cent of revenues.

The worry now is not complacency, but battle fatigue: "We drive this company hard, but it's the only way to do it," Mr Bonfield says. Mr Todd agrees: "We have gone through world war three, but we cannot relax. The fight goes on."

# Time for the new Italy to take power

PERSONAL VIEW

Economic growth and competitiveness are the world's dominant political themes today. In North America and Asia, the main concern of government and business is how to achieve a strong position in the global economy. Ideology has been abandoned in favour of a pragmatic search for the quickest, surest way to boost competitiveness and growth, and to turn the prospect of a new cycle of international economic growth into reality.

In Europe, on the other hand, the break with the past is not so clear-cut. Political attention seems to focus on the past rather than the future; on defence rather than attack; on rejuvenating the old rather than creating the new. The result is yet another year of missed business opportunities for Europe, and rising unemployment to socially unacceptable levels.

This contradiction is even more evident in Italy. Here, political debate has either failed to take account of the future now emerging; or it is confined to impromptu, demagogic assertions that ignore the global competition Italy should be preparing to meet, if it wishes to avoid being excluded from the ranks of industrialised nations.

Now, in the run-up to an election that will be decisive for the country's future, the electoral scene is far from inspiring.

On March 27 and 28, Italians go to the polls under a new electoral system – the outcome of a referendum which vetoed the intolerable regime of corruption and inefficiency generated by the lack of alternatives to the dominant political system. For months, debate centred on how to create an electoral system that would permit alternation between a progressive pole and a conservative pole, enabling Italy to stand alongside the great western democracies.

But partly because the new electoral law was the reluctant product of a parliament forced to act by the result of the referendum, the elections will take place in a climate dominated by three main factors.

- First, the reality of transformation: to a great extent these elections are in the hands of the offspring of the old political system, of whom the most brazen representative is the standard-bearer of Forza Italia, together with the embalmed remains of certain areas of the left.
- Second, the risk to economic self-sufficiency: a real risk which lies beneath the wonder cures promised by the right, or the sermons of the outdated apologists of the left.
- Third, confusion: the contest is riddled with left-over ideologies which have been disinterred for the occasion.

**Behind all the manoeuvrings of the politicians there is a country which has decided to move on**

Such suicidal behaviour may not be surprising coming from the new right; but it is alarming when it appears among the more serious elements of the centre and the left.

What politicians should be doing is explaining to the electorate that Italy is not the centre of the world, or even of Europe; and that if we want to remain at the forefront of world markets, we have to identify our competitive advantages and abandon rearguard actions and verbal wars.

Behind all the manoeuvrings of the politicians, old and new, in this vital election, there is a country which has decided to move on: this is the real Italy. The country has grown. You need look no further than today's great moral clean-up which, in its pursuit of a whole generation of corrupt politicians, has reached a scale unparalleled in any other country.

Or the spirit of sacrifice displayed by countless citizens in the face of an often chaotic, punitive fiscal system and an inefficient, oppressive public sector.

Or the vigour and innovative capacity of an entrepreneurial class that has reasserted its competitiveness despite the constraints under which it operates. The remarkable improvement in the trade balance in 1993 from L4,000bn to L50,000bn was not due entirely to devaluation.

This Italy must be represented politically by dignified action and thought. The growing interest in its financial markets demonstrates that Italy's international image is changing. And foreign observers' view of the new Italy is far more accurate than the picture created by the election campaign.

Italy cannot afford to forego the chance to take part in a new cycle of growth in an ever more interconnected world. This will require rational decisions, calculated sacrifices and an acceptable balance between recovery and growth. It means social consensus and a government capable of plotting an intelligent, pragmatic and credible course.

There is no room here for slogans and miracle makers. In today's world, non-alignment with other nations means economic and social decline, with the risk of losing the basic values of democracy and freedom.

This is the "Italian risk" two weeks before the elections.

**Carlo De Benedetti**

*The author is chairman of Olivetti*

# OBSERVER

## Nails out at Birmingham

■ Masochistic voyeurs have enjoyed watching Birmingham's local government draw up a list of candidates to recline on the bed of nails marked chief executive; the present occupant, Roger Taylor, has decided to go early.

Why should intelligent bureaucrats step in between the warring fiefdoms of council departments and combative councillors? It has to be the eighth deadly sin: ambition. Brum is England's largest metropolitan authority.

The council is silent over who wants the £80,000 a year job, but word is that among the 10 names in the frame are two women – Sheffield's Pamela Gordon and Southwark's Anna Wyatt. There is thus the intriguing possibility of a female alliance emerging. Theresa Stewart, the current Labour leader, faces difficult elections in May. Does she favour either Gordon or Wyatt? The last woman chief executive in the West Midlands – at Sandwell – eventually decamped for New Zealand. Must be something in the water…

## Removal time

■ Sounds of merchant banks on the move in the City of London. No sooner has BZW, Barclays' international investment bank, been given the green light to move in to its parent's soon-to-be-vacated Royal Mint Court headquarters, than word reaches Observer that Barings, the City's oldest merchant bank, is also flitting.

Barings, which has been at 8 Bishopsgate since 1807, is coy about its future movements. However, it is clear that if it goes through with its plan to combine its merchant bank and fast-growing securities business under one roof there is not going to be enough room for everybody at 8 Bishopsgate.

The obvious choice is for Barings to regroup at Baring Securities' vulgar America Square headquarters near the Tower of London.

But that would mean Barings giving up its precious EC2 postcode, which it shares with the Bank of England and other pukka members of the British banking community. No doubt the young turks now running Barings couldn't care less about their postcode.

But there are still some customers who worry about such things.

## Zebra crossed

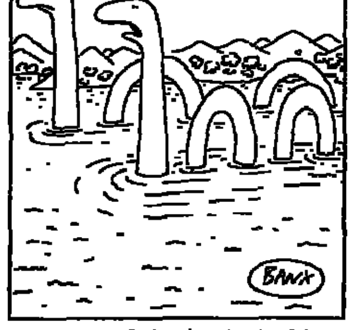
■ Not everyone hates Britain's motorway cones. Footballers like to use them to practice their dribbling.

Indeed, Newcastle United has become so attached to the cones at its Durham training ground that it has just had them kitted out in the club's colours.

Apparently, the Department of Transport's regulation red and white strip for its motorway cones is identical to the colours of United's rivals – Sunderland.

So United's manager Kevin Keegan turned to club vice-president, Tom Brown, for help. When Brown is not watching United, he's chairman of Northumberland-based RTM Group, which supplies cones and contra-flow cylinders for motorway contractors.

No sooner had Keegan blown the whistle than Brown had paid £1,000 to have his team's 50 red and white cones recovered in different colours so they wouldn't clash with United's black and white team strip.




'I suppose being labelled a fake is preferable to being in a sex scandal'

## Reptile house

■ Who says that members of the European parliament don't have a sense of humour?

Take Johanna-Christina Grund, a German Euro-MP. She has floated the notion that, given the high annual rent for the new parliamentary debating chamber – Ecu100m annually for 27 years – visitors should be charged an entry fee.

She says it should "be at a similar level for national museums, zoos, etc in Belgium". MEPs might occasionally be mistaken for stuffed exhibits and sometimes behave like animals; but really, let's have a pan-European aggregate rate, *please*.

## Scandal fiasco

■ When does the Whitewater brouhaha turn into a scandal? The resignation of Webster Hubbell, the US associate attorney general and US presidential buddy, raises a question which is vexing careful newspaper editors.

Up to yesterday, Observer's electronic database showed a total of 347 references to Bill and Hillary's Whitewater problems. There were 178 mentions of 'scandal' and just 111 'affairs'. Poor old uproar, fiasco, furore, blemish and slur don't warrant a mention; fuss gets just one.

Of course statistics are no guide to anything. With the tally to date standing at one suicide and two resignations, the verdict of one ex-member of President Bush's administration is: "Right now it's an affair. Four more resignations, then it's a scandal."

## Rapid progress

■ Whether or not Whitewater is more than an affair, it has clearly gripped the imagination of London's stockbrokers. In less than a week various bits of Warburgs, James Capel and UBS have sent out research with the same heading – Whitewater Rafting.

Hey guys, let's show a bit more creativity. In an effort to raise the standard of headline writing among City stockbrokers, Observer is offering a bottle of the finest malt for the most original Whitewater headline on a piece of published research.

## Strafed

■ What's the difference between Nato and the IRA?

The IRA knows how to enforce a no-fly zone.

FINANCIAL TIMES
Wednesday March 16 1994



# Mandela sends Zulus a warning on 'toy tyrants'

## Patti Waldmeir sees ANC chief triumph in Mmabatho

Mr Nelson Mandela, leader of the African National Congress, yesterday made a triumphal entry to the Bophuthatswana capital Mmabatho, congratulating the people of the black "homeland" for ousting President Lucas Mangope, and issuing a veiled warning that the same might happen to Zulu Chief Mangosuthu Buthelezi.

Some 40,000 people cheered wildly as Mr Mandela entered the futuristic Independence Stadium built to commemorate Bophuthatswana's granting of independence from South Africa in 1977, a sovereignty which only Pretoria recognised.

He had harsh words for Chief Buthelezi, leader of the KwaZulu black homeland, saying last week's events in Bophuthatswana would "send a signal" to him and to the white right wing.

"The people have risen and tyrants have fallen. This message will not be lost on people living under other toy tyrants in this country," he said. The comment bordered on a direct invitation to the people of KwaZulu to revolt.

Mr Mandela's remarks will not improve the political climate in Natal, where at least nine people were killed yesterday in fighting between supporters of the ANC and Chief Buthelezi's Zulu-based Inkatha Freedom party.

Nor do they improve prospects for the success of talks later this week between Mr Mandela and Zulu King Goodwill Zwelethini, aimed at ensuring Inkatha's participation in the first all-race elections in April. The king has strong links to Inkatha through Chief Buthelezi, who is chief adviser to the monarchy.

Mr Mandela denigrated the threat from Inkatha, saying he would suffer "no sleepless nights" over its promise to disrupt elections. The right wing, and by implication Inkatha, were "no more than those who bark without being able to bite," he said.

ANC leaders, who previously expressed grave concern at the right's potential to disrupt elections, have gained confidence since armed rightwing whites were chased out of Bophuthatswana on Friday. This new confidence is likely to undermine the ANC's commitment to bring Inkatha, the only remaining party boycotting the poll, into a constitutional settlement.

Mr Mandela arrived in Mmabatho yesterday morning to a low-key reception in the streets. Later in the day the largest crowd ever for a public event in Bophuthatswana turned out at the Independence Stadium, but it remained about a third empty.

The stadium is widely seen as a symbol of President Mangope's rule.

Mr Mandela condemned the looting which destroyed Mmabatho's shopping district, but ANC officials made clear to business people that an ANC government would not compensate them for what the officials implied was a necessary part of the liberation struggle.

However, Indian business people, many of whom lost all their stock, turned out to greet and garland the ANC leader. One Asian businessman said: "The Indian community are jumping on the bandwagon. They used to support Mangope, now they support Mandela."

# Fast US growth puts spotlight on rates

**By Michael Prowse in Washington**

**The US economy is continuing to expand rapidly, according to figures released yesterday, increasing the chances of another rise in short-term interest rates.**

**The Federal Reserve said industrial production rose an unexpectedly large 0.4 per cent in February, after a 0.5 per cent gain in January. Most analysts had expected production to be flat or down as a result of the severe weather last month.**

**The figures suggest that industrial output is growing at an annual rate of 7-8 per cent in the first quarter.**

**That indicates little slowdown in economic growth from the second half of last year, when gross domestic product grew at an annual rate of more than 5 per cent.**

**The Fed also reported a sharp increase in the rate of capacity utilisation in manufacturing industry to 82.6 per cent – only fractionally below the level traditionally associated with rising inflationary pressure.**

**Separately, the Commerce Department said producer prices rose 0.5 per cent last month. However, the increase mainly reflected higher energy prices. "Core" producer prices – which exclude volatile food and energy – rose only 0.1 per cent, less than expected.**

**On Wall Street, bond prices rose in early trading as investors interpreted the encouraging core producer price figures as a sign that rapid growth was not yet putting upward pressure on inflation.**

**However, the strong production figures and the higher capacity utilisation rate indicate that the economy is growing faster than its long-term potential rate of growth. That raises the chance that Fed governors and regional presidents – who meet in Washington next week to discuss interest rate policy – will tighten monetary policy another notch in coming weeks.**

**On February 4, the Fed raised short-term rates a quarter point to 3.25 per cent – the first increase for five years. That led to a sharp increase in long bond yields, now about 6.9 per cent, on the assumption that this was the first in a series of tightening moves.**

**Hopes on Wall Street that economic growth would slow sharply, taking pressure off the Fed to raise rates, are evaporating. J.P. Morgan, the New York bank, is projecting economic growth at an annual rate of 6 per cent in the second quarter, after a brief weather-related slowdown to 3 per cent in the present quarter. That would be not far short of the 7.5 per cent growth rate of the final period of last year.**

**Recent signs of strength include a surge in production and sale of cars and light trucks – usually evidence of buoyant consumer confidence.**

## THE LEX COLUMN

# Wolseley builds higher

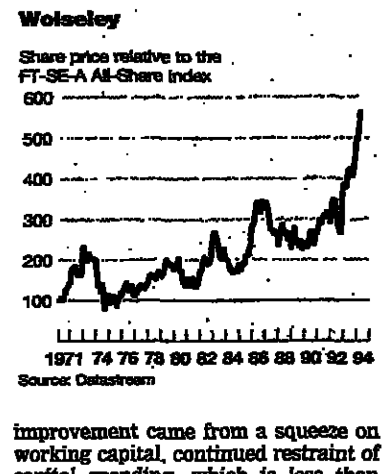
Wolseley has a habit of exceeding market expectations. Yesterday's 8 per cent rise in the shares following the release of half-year figures is a case in point. The company's reticence is partly the cause. More segmental information and an interim cash flow statement, for example, might help investors form a clearer view of what the future holds. The Stock Exchange's new disclosure guidelines are certainly no justification for clamming up. While the going is good shareholders will doubtless forgive, but such shyness cuts both ways. Wolseley's creditable history of outperformance is punctuated by some uncomfortably sharp corrections.

Yesterday's interim statement gives no immediate cause for concern. True, Wolseley will not enjoy the conditions of the 1980s unless the housing market is stoked into another frenzy. With inflation low, neither can it count on stock profits to boost margins. But the 12 per cent increase in UK sales shows how sensitive Wolseley's distribution business is to even a modest upturn in building activity. Since profits from European distribution rose by more than 50 per cent – with presumably little cheer coming from France – the operational gearing is clear.

The acquisition of Brossette in France two years ago might also provide the foundation for a wider European distribution network. If Wolseley can avoid tripping on the acquisition trail there should be growth as well as recovery to come. While the recent run-up in the shares argues for caution, that prospect leaves long-term holders with little incentive to sell.

**FT-SE Index: 3267.4 (+37.0)**

**Wolseley**




Source: Datastream

## Williams Holdings

Slowly but surely Williams Holdings is digging itself out of the hole in which it fell after its Racal bid failed. Full-year results show a rapid advance of operating profit in the second half thanks in large measure to a broader distribution base in the US. Cash generation is also improving with £47m left over after capital spending, interest, tax and dividend payments have been met. Just the same, in marking the shares up by a quarter since late November, the market may have become carried away. The balance sheet does not look strong enough to sustain much by way of cash acquisitions. More paper might well meet resistance, especially since dividend growth is likely to be pedestrian.

A significant part of the cash-flow improvement came from a squeeze on working capital, continued restraint of capital spending, which is less than half its peak in 1989, and a virtual end to spending of restructuring provisions. Williams now needs to generate cash from its basic operations. The presumption is that there will be a large beneficial effect from increased volumes once recovery gets under way.

Yet Williams still does not seem to have much scope to raise prices. Higher interest rates in the US and tax increases in the UK do not seem particularly conducive to volume growth. There may be some years of dividend restraint before Williams meets its target of two times cover. In the meantime Hanson is on a higher yield and BTR seems likely to offer faster earnings recovery.

## US economy

Yesterday's US producer price data confirmed the Federal Reserve's view that America does not have an inflation problem. But industrial production and capacity utilisation figures show why the bond market thinks it may be about to get one. By most calculations, the US has closed the output gap which opened during the recession. With capacity constraints now at their tightest since 1989, further growth above the long-term trend will probably stir inflation.

Growth may, however, moderate automatically – last year's fall in the savings ratio is not sustainable and the recent rise in bond yields will slow the housing market. But since most consumers will sit tight with low-cost, fixed-rate mortgages, rising yields are not as effective a brake as falling yields are a stimulus. And while the Fed's initial increase in short-term interest rates has had a powerful psychological impact on markets, its effect on the real economy is small. If the Fed becomes concerned about the pace of expansion, it will have to push up short rates more decisively.

That worry will probably keep the bond market on edge over the next few months. Once the Fed acts, however, longer yields may stabilise and fall if the threat of rising inflationary expectations recedes. Shares have remained resilient despite the high anxiety of the bond market. That decoupling may continue. If the rising output and falling unit wage cost figures are any guide, there is a strong profits recovery out there for someone.

## Mirror Group

Mirror Group Newspapers is in something of a bind. Tabloid newspaper sales are in long-term decline with the Sun's price offensive sharpening the Daily Mirror's falls. MGN is therefore keen to diversify. But with lowly-rated shares and gearing of 73 per cent, the group is severely disadvantaged against rivals boasting cash in hand and high-priced paper. MGN's proposed alliance with Newspaper Publishing may yield some cost savings but the deal remains marginal. The ingenuity of MGN's managers in unearthing expansion opportunities will be fully tested.

At least MGN can keep profits moving by running its existing businesses more efficiently. Trading margins – excluding restructuring charges – have already risen to 24 per cent. But further gains should come from moving to Canary Wharf and improved utilisation rates at its print plants. Advertising revenue has been growing strongly as a result of some smarter newspaper supplements and the general market bounce.

Arguably, MGN has been sensible in not responding more aggressively to price wars. But the 1 per cent fall in circulation revenue suggests it is now being badly burnt by the Sun. The real worry comes if the Mirror's decline endangers its advertising rate card. With such doubts in mind, one can only admire the prescience of the administrators in placing their stake last September. Having outperformed the media sector by 44 per cent in the six months before the placing, MGN has underperformed by 13 per cent in the six months since.

## Joint ventures accused of restricting competition

# EU to tighten telecom rules

**By Lionel Barber in Brussels**

The European Commission yesterday served notice that it intends to take a more active role in policing joint ventures in the fast-growing telecommunications market.

Mr Philip Lowe, head of the Commission's merger taskforce, said Brussels would look closely at industry proposals for co-operation that might restrict competition.

He told the Brussels Telecommunications Forum, a private grouping, that technology was moving so fast that it was outstripping decision makers and posing a challenge to regulators. "Frankly, we have to watch it."

Mr Lowe predicted the European Union would have to accelerate its agreed timetable for liberalising national markets for voice telephony from January 1998 – a view shared widely inside the Commission.

Mr Lowe's speech provided the first clues on future regulatory policy in telecoms, a booming market which could see most of Europe's state companies privatised before the end of the century.

Mr Lowe suggested two areas where the competition directorate would either extend its powers or "clarify" its jurisdiction:

● Lowering the thresholds above which Brussels automatically vet deals, from Ecu250m ($275m) annual turnover in the EU market to Ecu100m. Mr Lowe said telecom ventures usually started with a low turnover but could grow very quickly.

● Examining the definition of industrial "co-operation". Joint ventures may not amount to market concentration but they could still restrict competition, Mr Lowe suggested.

In the past year, the directorate's merger taskforce has vetted 10 cases involving telecoms operators, including a British Telecom proposal to provide valued added services with MCI, a US telecoms company. Overall, it looked at 200 cases in all industrial sectors.

In one case Philips, the Dutch electronics giant, withdrew a proposed joint venture with Siemens, the German industrial company, for a big optical fibre cable project.

Mr Lowe reminded industry of the advantages of co-operating with Brussels. Takeovers of a certain size are automatically investigated within a month. Where serious doubts exist about their effect on competition, they are subject to a four-month inquiry. Separately, companies considering joint ventures or mergers can seek informal guidance.

● The Commission approved BMW's purchase of the UK carmaker Rover from British Aerospace yesterday. Also, in its first ever ruling in the newspaper publishing sector, it approved the Mirror Group-led consortium's purchase of Newspaper Publishing, which publishes the Independent and Independent on Sunday in the UK.

# G7 urges IMF to let Russia have $1.5bn

**Continued from Page 1**

industrial, energy and agricultural lobbies for more credits.

However, he has also tried to make clear to the IMF the severity of the crisis he faces. The draft budget – which has not yet gone to the state duma, or lower house of parliament, for the required ratification – envisages expenditure of Rbs183,000bn and income of about Rbs120,000bn – leaving a budget deficit of about 10 per cent of gross national product, a figure generally regarded as tight in present circumstances.

The income, however, is already proving wildly optimistic. Government insiders said yesterday that government income, mainly from taxes, was running at only some Rbs70,000bn to Rbs80,000bn a year.

Even to produce the figures he has, Mr Sergei Dubinin, the acting finance minister, sharply cut the bids of all the main ministries – limiting the military to Rbs37,000bn when officers are prophesying army mutinies unless it is given Rbs80,000bn, or more than 40 per cent of presently budgeted expenditure.

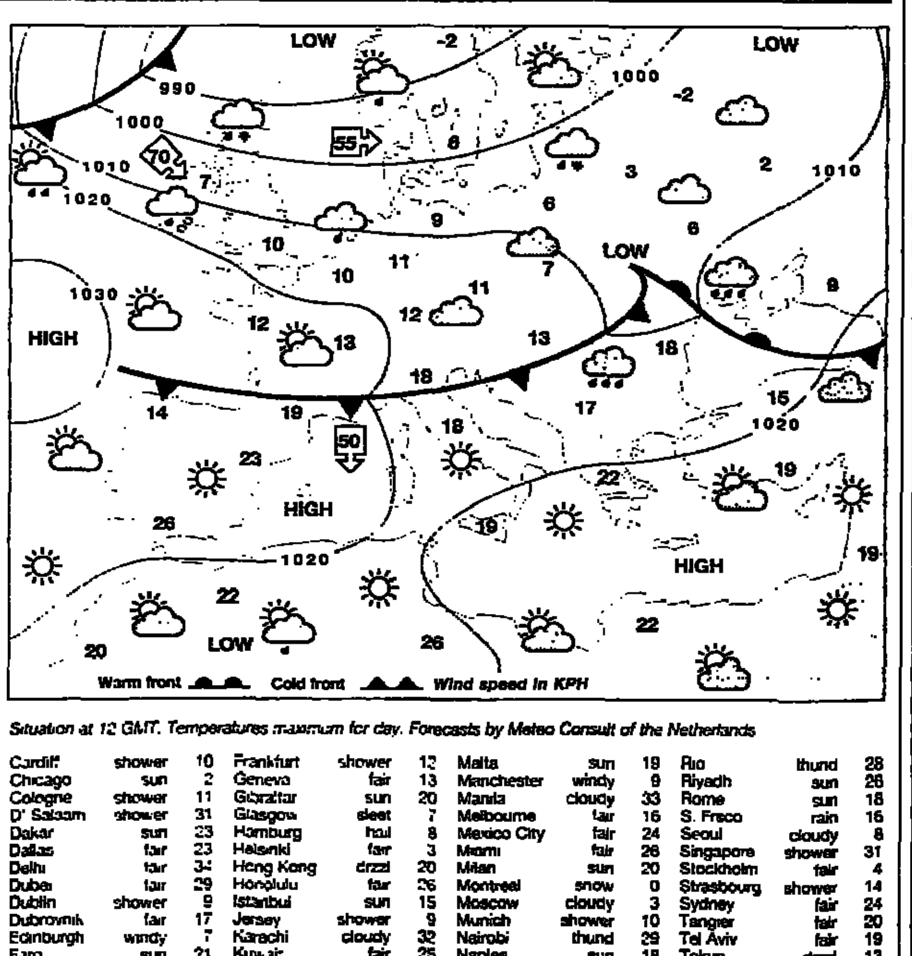
## FT WEATHER GUIDE

### Europe today

A cold front, separating mild air in southern Europe from cool air in northern Europe, will form over the Alps, the Balkan states and Belarus. There will be cloud and rain. In the Alps, some snow is expected above 1300 meters. South of the front, conditions will remain mild with sunny periods over the former Yugoslavia and Italy. Southern Greece, Turkey, Cyprus, Spain and Portugal will have abundant sunshine. Highest temperatures are expected in the Algarve (in excess of 25C). North of the front, cold air from the arctic will flow into Scandinavia, Denmark, the British Isles, the Benelux, Germany and Poland. There will be frequent wintry showers, accompanied by westerly winds occasionally approaching gale force.

### Five-day forecast

Conditions over the northern half of Europe will become unsettled as cold air from northern latitudes flows south. There will be snow showers and hail with thunder. It will be unseasonably cold. Conditions in southern Europe will remain settled and dry with spring-like conditions and plenty of sunshine.




Situation at 12 GMT. Temperatures maximum for day. Forecasts by Meteo Consult of the Netherlands

**TODAY'S TEMPERATURES**

| | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Maximum | | Belfast | hail | 8 | Cardiff | shower | 10 | Frankfurt | shower | 12 | Malta | sun | 19 | Rio | thund | 28 |
| | Celsius | | Belgrade | fair | 18 | Chicago | sun | 2 | Geneva | fair | 13 | Manchester | windy | 9 | Riyadh | sun | 26 |
| Abu Dhabi | fair | 29 | Berlin | shower | 10 | Cologne | shower | 11 | Gibraltar | sun | 20 | Manila | cloudy | 33 | Rome | sun | 18 |
| Accra | fair | 32 | Bermuda | cloudy | 23 | D' Salaam | shower | 31 | Glasgow | sleet | 7 | Melbourne | fair | 16 | S. Frsco | rain | 16 |
| Algiers | fair | 22 | Bogota | fair | 20 | Dakar | sun | 23 | Hamburg | hail | 8 | Mexico City | fair | 24 | Seoul | cloudy | 8 |
| Amsterdam | shower | 9 | Bombay | sun | 34 | Dallas | fair | 23 | Helsinki | fair | 3 | Miami | fair | 26 | Singapore | shower | 31 |
| Athens | sun | 20 | Brussels | shower | 10 | Delhi | fair | 34 | Hong Kong | drzzl | 20 | Milan | sun | 20 | Stockholm | fair | 4 |
| B. Aires | shower | 25 | Budapest | fair | 15 | Dubai | fair | 29 | Honolulu | fair | 26 | Montreal | snow | 0 | Strasbourg | shower | 14 |
| B.ham | shower | 11 | C.hagen | sleet | 7 | Dublin | shower | 9 | Istanbul | sun | 15 | Moscow | cloudy | 3 | Sydney | fair | 24 |
| Bangkok | cloudy | 35 | Cairo | sun | 22 | Dubrovnik | fair | 17 | Jersey | shower | 9 | Munich | shower | 10 | Tangier | fair | 20 |
| Barcelona | sun | 18 | Cape Town | sun | 25 | Edinburgh | windy | 7 | Karachi | cloudy | 32 | Nairobi | thund | 29 | Tel Aviv | fair | 19 |
| Beijing | fair | 9 | Caracas | fair | 25 | Faro | sun | 21 | Kuwait | fair | 25 | Naples | sun | 18 | Tokyo | drzzl | 13 |
| | | | | | | | | | L. Angeles | shower | 20 | Nassau | fair | 26 | Toronto | snow | -1 |
| | | | | | | | | | Las Palmas | fair | 22 | New York | sleet | 6 | Tunis | fair | 21 |
| | | | | | | | | | Lima | fair | 27 | Nice | sun | 17 | Vancouver | rain | 12 |
| | | | | | | | | | Lisbon | sun | 22 | Nicosia | sun | 17 | Venice | hazy | 16 |
| | | | | | | | | | London | shower | 11 | Oslo | cloudy | 5 | Vienna | fair | 15 |
| | | | | | | | | | Lux.bourg | shower | 10 | Paris | fair | 12 | Warsaw | cloudy | 7 |
| | | | | | | | | | Lyon | fair | 14 | Perth | sun | 36 | Washington | shower | 9 |
| | | | | | | | | | Madeira | fair | 19 | Prague | fair | 10 | Wellington | rain | 18 |
| | | | | | | | | | Madrid | sun | 21 | Rangoon | fair | 36 | Winnipeg | fair | 0 |
| | | | | | | | | | Majorca | sun | 20 | Reykjavik | cloudy | -1 | Zurich | cloudy | 12 |

FINANCIAL TIMES
# COMPANIES & MARKETS
Wednesday March 16 1994





## IN BRIEF

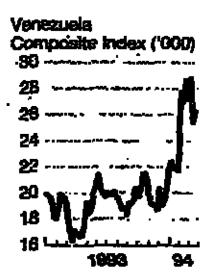
### JP Morgan backs Banesto board

The caretaker board of Banesto believes it has won the support of J. P. Morgan of the US for a major dilution of the troubled Spanish bank's equity as part of a rescue plan. Page 16

**Wall Street greets bid**
The prospect of a second big takeover in the mutual fund business in the US in a matter of months lit up Wall Street yesterday. Shares in Kemper, the Chicago-based asset management, life insurance and broking company, leapt 50 per cent from Monday's close on an uninvited bid from GE Capital. Page 18

**ADR move leads the way**
An American Depositary Receipt programme launched by Companhia Vale do Rio Doce, the world's largest iron ore exporter, is meant to be a first step in a plan to finance joint ventures with foreign companies. Page 17

**Tax tremors in Caracas**




A new tax proposed by the Venezuelan government covering most debit transactions at domestic banks has sent tremors through the Caracas stock exchange. When a series of tax bills were presented to congress, the Caracas index fell 4.3 per cent, and over the week shed more than 10 per cent in local currency terms. The market has returned to positive territory this week. Back Page

**Williams Holdings falls by £4.2m**
Williams Holdings, the UK fire protection, building products and security group announced a £4.2m drop in profits to £153.2m ($224m). Page 22

**Medeva founder quits**
Mr Ian Gowrie-Smith, the Australian entrepreneur who founded Medeva, the UK drugs group, is resigning his executive position. Page 22

**Maid shares at 110p**
Shares in Maid, the UK on-line business information supplier, were priced at 110p valuing the group at £89.1m – well below expectations. Page 22

**Bad time at Saatchi**
Charles Scott, group chief executive of Saatchi and Saatchi, described the past 18 months as the worst in his life. Page 22

**MGN celebrates**
Mirror Group Newspapers, the UK newspaper publisher, celebrated its independence from administrators and the legacy of the late Robert Maxwell by announcing higher than expected pre-tax profits. Page 16

**Wolseley shares rise**
Shares in Wolseley, the world's biggest supplier of heating and plumbing equipment, soared by 69p to 971p yesterday as the UK group surprised with a sharp rise in profits. Page 16

### Companies in this issue



### Market Statistics



### Chief price changes yesterday

**FRANKFURT (DM)**

| | | | |
|---|---|---|---|
| **Rises** | | | |
| Bayer-Hypo | 456 | + | 10.5 |
| Dresdner Bank | 407 | + | 7.5 |
| Goldschmidt | 625 | + | 10 |
| Porsche | 912 | + | 22 |
| Schering | 1073 | + | 37 |
| **Falls** | | | |
| Bil & Berger | 891 | - | 29 |

**NEW YORK ($)**

| | | | |
|---|---|---|---|
| **Rises** | | | |
| CBS Inc | 310 | + | 7½ |
| Timberland | 54¼ | + | 2¾ |
| Starbucks Deb | 99½ | + | 5 |
| **Falls** | | | |
| Grupo Radio | 25¼ | - | 1¼ |
| Pemgo Co | 23 | - | 4½ |
| Ventritex Inc | 22½ | - | 2½ |

**PARIS (FFr)**

| | | | |
|---|---|---|---|
| **Rises** | | | |
| Axa | 1425 | + | 53 |
| Chargeurs | 1487 | + | 62 |
| L'Oreal | 1313 | + | 48 |
| Radiotechn | 553 | + | 34 |
| Union Immob | 700 | + | 29 |
| **Falls** | | | |
| GTM-Entrepose | 480 | - | 28 |

**TOKYO (Yen)**

| | | | |
|---|---|---|---|
| **Rises** | | | |
| Asahi Optical | 509 | + | 17 |
| Fujita Kanko | 2400 | + | 160 |
| Komatsu | 972 | + | 33 |
| Nisshin Steel | 436 | + | 20 |
| Toyo Tire&Rub | 410 | + | 25 |
| **Falls** | | | |
| Toei | 880 | - | 19 |

New York prices at 12.30pm.

**LONDON (Pence)**

| | | | |
|---|---|---|---|
| **Rises** | | | |
| Andrews Sykes | 90 | + | 5 |
| Baldwin | 113 | + | 8 |
| Barclays | 555 | + | 22 |
| Elbief | 21 | + | 4½ |
| Emess | 32 | + | 2½ |
| Evans Halshaw | 549 | + | 17 |
| Greggs | 773 | + | 20 |
| Medeva | 155 | + | 7 |
| Meyer Intl | 545 | + | 39 |
| Mirror Group | 197 | + | 7 |
| Owen & Rob'son | 34 | + | 8 |
| Scholes | 210 | + | 11 |
| Scotia Hldgs | 271 | + | 16 |
| Sedgwick | 212½ | + | 11½ |
| Tiphook | 55 | + | 5 |
| Wolseley | 975 | + | 73 |
| **Falls** | | | |
| Amesco | 99 | - | 6 |
| Bakyrchik | 328 | - | 12 |
| Brown & Jack'n | 2¾ | - | 3¼ |
| Everest Foods | 88 | - | 9 |
| Ingham | 131 | - | 31 |
| Kleeneze | 226 | - | 16 |
| Takare | 249 | - | 17 |
| Wimpey (G) | 210 | - | 8 |

# Regulators move to limit risks on OTC derivatives

By Norma Cohen, Tracy Corrigan and Laurie Morse in Chicago

British and American securities regulators yesterday announced a joint effort aimed at limiting risks to the international financial system posed by the explosive growth of over-the-counter derivative instruments.

These instruments are not traded on exchanges, have no official market price, and are tailor-made to suit the needs of individual counterparties. Because their design is not standardised and there is no objective way to measure their value, banks and securities firms may assess the risk differently.

Regulators have no desire to stifle product innovation but are concerned that securities firms have proper internal management controls to help them account for and understand the risks they take and to ensure adequate capital is set aside.

The agreement is between the UK Securities and Investments Board, and two US bodies, the Securities Exchange Commission and the Commodities and Futures Trading Commission.

"Everyone feels there is no sense in trying to regulate this product," said Mr Andrew Large, chairman of the SIB.

"What we want is to ensure that securities firms have the capital base, the controls and the understanding of the risk."

The move stemmed from talks last year between the SEC and the SIB and follows a similar agreement between US and UK banking firms.

Mr Carter Beese, a commissioner at the SEC said: "Over the past year there has been a very high level of co-operation between banking and securities authorities in the US."

In addition to promoting internal management controls, the SEC and the SIB want to ensure that firms understand how "severe market conditions" affect the value of their securities, that there be a common approach to the accounting recognition, measurement and disclosure of positions and that there be enhanced information sharing.

Mrs Barbara Holum, acting chairman of the CFTC, said the near-collapse of MG Corp, the US arm of the German group Metallgesellschaft, due to oil and gas derivatives dealings, underscored the urgency of such an agreement.

Over-the-counter derivative traders gave cautious endorsement to the pact, saying it paralleled the agenda of international banking regulators. "The agencies appear to be moving along the same lines as the banking regulators."

"We had been concerned that the securities regulators might be moving in a different direction," on issues like transaction netting, said Mr Joseph Baumann, President of the International Swaps and Derivatives Association, and director of global derivatives trading for Citibank.

Background, Page 21

■ Building and public works arms to combine ■ Much reduced exceptional costs

# Lyonnaise des Eaux-Dumez doubles profit

By John Ridding in Paris

Lyonnaise des Eaux-Dumez, the French utilities and communications group, yesterday announced both a strong recovery in 1993 profits and a restructuring of its construction and public works activities to strengthen their position in international markets.

Mr Jérôme Monod, chairman, said preliminary results showed net profits of FFr800m ($133m) last year, more than double the FFr379m achieved in 1992, but still below the previous year's FFr1.17bn. Turnover rose by 3.5 per cent to FFr93.6bn.

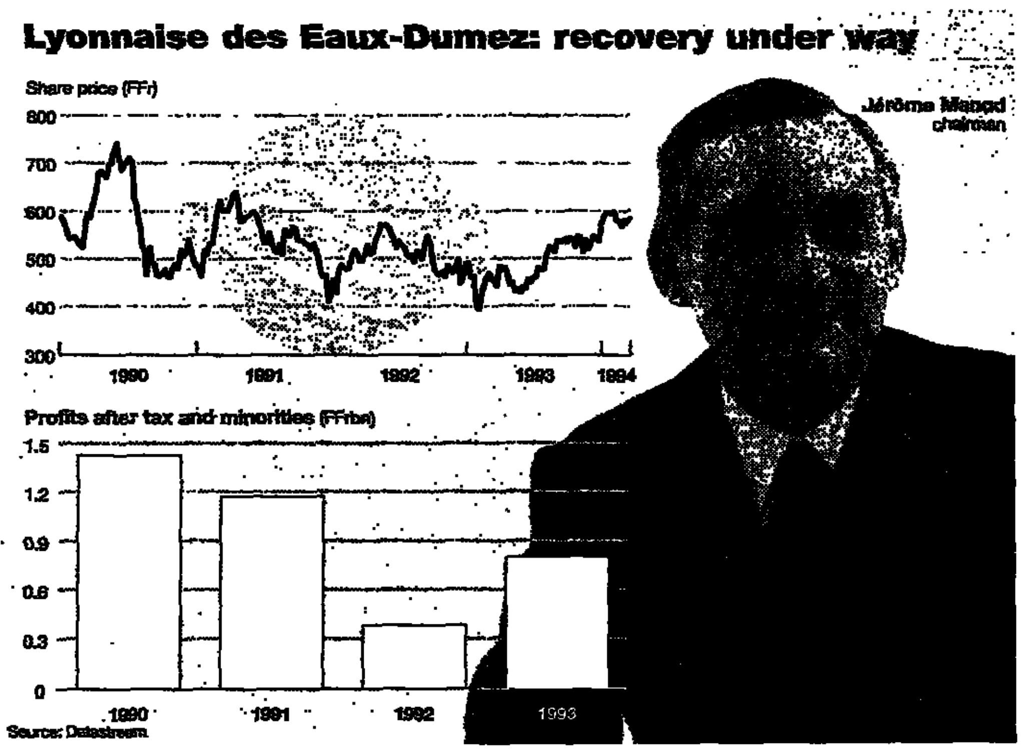
According to Mr Monod, the improvement in results and signs of recovery in the construction sector helped explain the group's decision to merge the building and public works activities of its Dumez and GTM-Entrepose subsidiaries.

The combined company, to be called Dumez-GTM, will have annual sales of about FFr25bn and a workforce of 35,000. According to the chairman, it should allow the group to compete more effectively for significant infrastructure and public works contracts in France, other parts of Europe and in south east Asia.

Industry observers, however, expressed caution about the benefits. "It may bring more clout, but there is unlikely to be a large reduction in costs from merging two construction groups," said one.

The group said that no job cuts would be involved in the reorganisation.

Mr André Jarrosson, chairman of GTM-Entrepose, said the changes should be completed by the summer. Dumez-GTM will be held 50-50 by GTM-Entrepose and Dumez. Lyonnaise des Eaux-Dumez will continue to hold 60 and 100 per cent respectively of GTM-Entrepose and Dumez.




GTM-Entrepose, which also has significant non-construction activities such as engineering and offshore contracting, will retain its market listing.

Shares in GTM-Entrepose fell by FFr28 to FFr480, reflecting concerns about the impact of the restructuring on minority shareholders and a reduction in net profits from FFr202m to FFr170m. By contrast, Lyonnaise des Eaux-Dumez exceeded market expectations with its turnaround, pushing shares up FFr8 to FFr592.

Last year's improvement reflected a reduction in exceptional charges for property and construction. "The rise in profits was more the result of lower provisions than organic growth," said Mr Ben Uglow, construction analyst at Robert Fleming.

# Bayer lifts hopes for German chemicals

By Christopher Parkes in Frankfurt

Hopes of an end to the German chemicals industry's four-year profits slump were raised yesterday by the release of better-than-expected earnings figures from the Bayer group.

In line with the group's forecast, the dividend was unchanged at DM11 and sales fell 0.5 per cent to DM41bn ($23bn).

Although Mr Manfred Schneider, chairman, had suggested in January that earnings would be better than forecast, net income of DM1.37bn, down 12.2 per cent, and pre-tax profits of DM2.35bn, down 12.6 per cent, were ahead of many analysts' expectations.

When Bayer reported pre-tax profits and sales down 19 per cent and 2 per cent respectively for the first nine months of 1993, the management said it expected a fall of 20 per cent in gross earnings for the full year.

The group, which had previously predicted flat profits for 1994, is likely to offer a clearer view of prospects at its annual press conference on Friday.

Bayer has traditionally fared better in recession than its main domestic rivals, Hoechst and BASF – both of which announced a DM2 cut in their 1993 dividends – because of its strength in healthcare and relative lack of reliance on basic chemicals. The drugs businesses generate two-thirds of profits.

Healthcare sales were 5 per cent up at the nine-month mark, despite reductions in domestic health services.

The supervisory board yesterday agreed to propose an end to voting restrictions, imposed in 1975, at this year's annual meeting. Shareholders' voting rights have been limited to 5 per cent regardless of the size of holding.

# Emotional attack on Rover's sale to BMW

By Kevin Done, Motor Industry Correspondent

Rover group, the last British-owned volume car producer, will officially pass into the ownership of BMW, the German carmaker, on Friday, but only after a bitter expression of opposition from small shareholders in British Aerospace.

The takeover cleared the two final hurdles yesterday, when it was approved by both the European Commission and BAe shareholders. Shareholders at BAe's extraordinary general meeting voted 111 to 42 on a show of hands to reject the deal, but it was passed overwhelmingly by proxy votes of 119.6m to 2.9m.

BMW is paying £800m cash and taking over £200m of net debt and £700m of off-balance sheet funding to purchase an 80 per cent stake in Rover.

The BAe board has faced the unremitting hostility of small shareholders to the sale. Outside the meeting a handful of demonstrators with one 23-year-old Land Rover protested, armed with a couple of union flags and two placards declaring "Sale of Rover Industrial Dunkirk" and "European Union means death for British industry".

Inside the meeting the atmosphere was much tougher, and Mr John Cahill, the departing BAe chairman, floundered as he was bombarded with fierce criticism and emotional outbursts.

The BAe board was accused of "selling the family silver" and of damaging Britain's relations with Japan. The sale of Rover to Germany was called "offensive" and "objectionable".

The integrity of the board was attacked, it was accused of telling "half truths and untruths", of selling the wrong business, and of failing to win written guarantees for keeping Rover jobs and its technology base in the UK.

There was loud ironic applause when Mr Cahill was told, "you are on your way back home to the US with a £3.5m bonus", and the BAe chairman struggled to control the meeting.

Why did BAe have to increase its borrowing limits when it was receiving £800m in cash, wondered one shareholder.

But after two hours of rancour, the BAe proxy votes ensured that Britain will no longer own a volume carmaker.

The European Commission said yesterday that BMW's takeover of Rover would "only have a limited effect in terms of industry concentration."

## Barry Riley

# Break-up threat to pension fund fantasy league

It is the annual results season for the UK's occupational pension schemes. Trustees are poring over sheets of opaque investment numbers, the two main measuring agencies are about to publish their aggregated returns and fund managers are preparing variously to boast or to make excuses. But as the annual league table exercise nears its climax, there is a strong feeling that the game is changing. Britain's unique focus on a shrinking universe of so-called balanced managers who are engaged in the tweaking of near-consensus strategies may be shifting.

As pension plans become ever more mature – that is, they move towards a position where they will pay out more in benefits than they receive in contributions – their risk tolerance grows smaller and their need to match their assets in a customised way to their individual liabilities becomes greater.

Yet if the old order is going out, it is retreating in some style. According to provisional figures from one of the measurers, Caps, the median fund returned 29 per cent last year, a result only beaten once (in 1989) in the past decade. The five-year average annual rate of return for the median fund now works out at 16.7 per cent, a long way above assumed actuarial returns which are based on a small margin over growth in average employee earnings.

Certain managers achieved exceptional returns last year, such as Schroders with almost 33 per cent. Morgan Grenfell did well too, and among the smaller contenders Newton hit 35 per cent. The market leader Mercury Asset Management keeps its figures to itself – there is a wide dispersion among its hundreds of client funds – but Gartmore and Phillips & Drew Fund Management both had unexciting years: Gartmore was pulled just above the median at the end of the year by Hong Kong but PDFM stayed just below after its bearish dash for cash proved ill-timed in the final quarter (though it will have enjoyed this year so far).

**As pension plans become more mature, their risk tolerance grows smaller**

But with equity and bond markets booming worldwide the value added by the average manager does not seem to have been substantial. No great strategic initiatives appear to have been taken in 1993. According to Caps, exposure to UK equities drifted by 2 percentage points to 58 per cent of the average portfolio, while overseas equities expanded by 1.5 points to 24.5 per cent. Overseas bonds at 6 per cent scarcely budged, nor did UK fixed interest bonds at 3.5 per cent (the UK government's £50bn ($73bn) gilt-edged selling programme passed pension funds by).

The biggest current bets appear to be in international equity allocations, where the US and Japan together accounted for only 30 per cent of overseas equities at the end of 1993 although they represented 65 per cent of the world ex-UK capitalisation. Many managers, however, have recently been going back into Japan and moderating the extreme exposure to continental Europe and the Pacific Rim (ex-Japan). The latter two regions accounted for 65 per cent of pension fund overseas equity holdings, but for only 24 per cent of the world ex-UK market.

Despite these tilted weightings, the present allocations of UK pension funds can be almost wholly explained by the passive cumulative impact of past returns. Instead of targeting an asset allocation and then periodically rebalancing (by selling assets that have outperformed and buying others that have underperformed) the managers have let their winners run. That may sound reasonable but it ignores the accumulation of risk.

Now the balanced managers have reached an 82 per cent exposure to equities. Some pension plans such as that of British Rail are beginning to buckle under the strain and set up dedicated bond portfolios which are better matched to their ever-shortening liability structure.

More generally, the fully-discretionary mandate is being phased out in favour of benchmarks, usually set in terms of a combination of indices (or for a specialist mandate, only one). This process is rapidly turning the general performance table into a kind of fantasy league, which will have to be replaced by many different specialist league tables.

It will be a whole lot more rational but a whole lot less fun.

# ISS increases profits but leaves dividend unchanged

By Hilary Barnes in Copenhagen

ISS, the industrial cleaning group which plans a listing on the New York Stock Exchange this year, reported an increase in pre-tax profits to DKr593m ($60m) in 1993 against DKr377m in 1992.

Net profits advanced to DKr462m from DKr266m, while turnover was up at DKr13.30bn from DKr11.35bn, of which 38 per cent was in the US, 35 per cent in Scandinavia and 24 per cent in Europe. Group employment increased to 125,900 from 115,000.

The group said the 17 per cent advance in turnover and 13 per cent increase in operating profits took place while important markets such as Finland and Sweden were in recession and against a background of currency turbulence. The Swedish and Finnish currencies depreciated against the krone by around 20 per cent.

The $93.5m acquisition of the National Cleaning Group of the US on June 1 doubled the size of the group's North American operations. An unchanged DKr10 per share dividend will be paid, but after a one-for-five subscription issue last year the total pay-out increases to DKr51.9bn from DKr43.3bn.

● The East Asiatic Company, the trading group with extensive interests in East Asia, moved back into the black with a net profit of DKr144m in 1993 compared with a loss of DKr1.18bn in 1992.

Profit after net financial items increased to DKr275m from a 1992 loss of DKr128m. Sales were up at DKr11.12bn from DKr10.29bn for the companies continuing in the group. The group has undergone major surgery over the past 18 months under a new chief executive, Mr Michael Fiorini, selling off its container line shipping services and the Plumrose food processing companies in the UK, the USA, Australia and New Zealand.

Net interest-bearing debt has been reduced to DKr2.9bn from DKr5.9bn over the past year, while return on capital invested improved from 3.6 in 1992 to 6.3 per cent last year.

# Business travel tie-up for Carlson and Accor

By David Buchan in Paris

Carlson Companies of the US and Accor of France are pooling their business travel operations in a joint venture, Carlson Wagonlit Travel (CWT), which they plan to develop globally for their corporate clients.

With more than 4,000 travel agencies in 125 countries providing $10.8bn in revenue, they said the joint venture would have 8 per cent of the world business travel market, 20 per cent ahead of their nearest rival, American Express.

Through their combined purchasing power and synergies in computer reservation systems and in developing a new travel credit card, the CWT joint venture is aiming for a cheaper service for corporate clients.

The CWT joint venture will be "a real working union, not a paper partnership," claimed Mr Travis Tanner, president of Carlson Travel. However, the two parent groups will keep their respective hotel activities, and even in business travel only envisage a full merger after their joint activities are working smoothly.

Essential - or just extra baggage? page 12

# Banesto wins JP Morgan support

By Tom Burns in Madrid

The caretaker board of Banesto believes it has won the support of J. P. Morgan of the US for a major dilution of the troubled Spanish bank's equity as part a rescue plan.

Backing from J. P. Morgan, which controls Banesto's biggest shareholder, would remove a doubt hanging over Banesto's AGM, scheduled for March 26, when shareholders will be asked to accept a 43 per cent write-down in the par value of Banesto shares. It would also pave the way for the troubled bank's re-capitalisation by the domestic financial sector.

J. P. Morgan advised Mr Mario Conde, Banesto's former chairman dismissed by the Bank of Spain in December after inspectors discovered the bank had grossly over-valued its assets. J. P. Morgan engineered a large rights issue for Banesto last year and, through the Corsair Fund that it manages, had invested $175m of US institutional funds in the Spanish bank.

A spokesman for Banesto said yesterday that although J. P. Morgan had still not delivered its support to the new board in writing there had been fruitful and fluid high-level contacts in the past weeks with the US bank. Relations with J. P. Morgan had been cool following Mr Conde's sacking.

The spokesman said there had been no contact with Mr Robert Mendoza, the J. P. Morgan vice-president who introduced the Corsair Fund to Banesto and masterminded the rights issue. He said J. P. Morgan's office in Madrid, which had a limited role in advising Banesto's former management, had been a party to the renewed contacts.

It is believed that the Corsair Fund could make a further investment in Banesto's restructured equity base to remain a significant shareholder in the bank. Under the proposed write-down and the subsequent re-capitalisation, the Corsair's current 7.9 per cent holding in Banesto will be diluted to 4.5 per cent.

# SGS advance curtailed by SFr27m restructuring charge

By Ian Rodger in Geneva

Société Générale de Surveillance, the Swiss inspection and insurance loss adjusting group, reported a 1.3 per cent rise in net income in 1993 to SFr196.1m ($91m) in spite of a SFr27.2m exceptional charge for discontinued activities.

Earnings per share grew faster, 7.15 per cent, to SFr22.02 per registered share and SFr110.10 per bearer share, due to the successful campaign last year to buy back for cancellation 5 per cent of the share capital. The directors have recommended a 7 per cent rise in dividends.

Mrs Elisabeth Salina Amorini, SGS chairman, said the group looked forward to the current year "with confidence", expecting that the effects of internal restructuring and the economic recovery in the US and the UK would boost profits. Mr Serge Pahud, finance director, said no further restructuring charges were expected this year.

Revenues last year were up 6.8 per cent to SFr2.6bn, thanks to 6.3 per cent of internal growth, 1.5 per cent from acquisitions and a negative 1 per cent from exchange rate adjustments. Operating income advanced 8.9 per cent to SFr237.4m.

Mr Thierry Chéreau, chief executive, said brisk business in Asia, Africa and Latin America offset sluggish performances in Europe and North America. Revenues from European countries were flat at SFr1.19bn, with growth in eastern European countries preventing a decline. Revenues from North America were up 9 per cent to SFr648.6m while income from the Asia-Pacific region advanced 11.1 per cent to SFr562.7m.

Net financial revenues eased only marginally to SFr59m, in spite of the downward trend of interest rates last year, but pre-tax profits dropped 1.8 per cent to SFr269.2m because of the restructuring charges.

# Norske Skog to raise NKr800m

By Karen Fossli in Oslo

Norway's Norske Skog, one of Scandinavia's largest pulp and paper producers, is making a two-step share issue to raise around NKr800m ($73m).

In the first step, NKr400m is to be raised through a 1-for-10 rights offering, with preferential rights given to existing shareholders to purchase shares of the same class. A subscription price of NKr150 per share has been proposed.

The second step involves authorisation of the board to issue up to 2,650,000 restricted non-voting 'B' shares, aimed at international investors, to raise another NKr400m.

"In order to broaden the company's investor base, it will be proposed that existing shareholders waive their preferential rights for the international offering," Norske Skog said.

Mr Jarle Langfjaeran, a company executive, said the proceeds of the two offerings would increase financial flexibility to undertake a number of planned projects.

He said that in 1994, Norske Skog intended to build a new de-inking plant in Norway used for the treatment of waste paper. Construction is to begin later this year. At the domestic Tofte chemical pulp mill, there is a programme to gradually convert the mill to total chlorine-free pulp. Elsewhere in Norway, a new saw line is to be installed at an existing mill, while there are a number of other minor projects planned for this year.

# Life side boosts Royale Belge

By Gillian Tett in Brussels

Royale Belge, Belgium's largest insurance group, yesterday said that an expansion in its life insurance businesses had helped push profits up by 11 per cent last year.

Consolidated profits for 1993 were BFr4.9bn ($94m), up from BFr4.4bn in the previous year. Turnover rose above BFr100bn for the first time, to BFr104.4bn in 1993.

The board is proposing a dividend of BFr160 a share, up from BFr147 the previous year.

Mr Jean-Pierre Gerard, chief executive, said that the improvement had been helped by the healthier financial climate and the restructuring programme which the company has implemented in the past four years.

This restructuring, which is expected to lead to a 20 per cent cut in the workforce over eight years, has divided the group into two specific operations, one of which deals with independent brokers, the other with salaried agents.

With Royale Belge now preparing to expand into other parts of the EU insurance market, the group would be aiming for a profit increase of between 8 and 15 per cent in 1994, its board of directors said.

But although the group had seen strong results from the life insurance sector, which forms 31.4 per cent of its business in Belgium, its fire and automobile insurance sectors had recorded a loss in the previous year, the group admitted.

# Wolseley shares soar on result

By David Blackwell in London

Shares in Wolseley, the world's biggest supplier of heating and plumbing equipment, soared by 69p to 971p yesterday as the UK group yet again surprised the City of London with a sharp rise in interim profits.

Pre-tax profits for the six months to January 31 rose by 83 per cent to £87m ($127.02m) from £47.6m. Analysts had expected around £70m.

Turnover rose from £1.15bn to £1.54bn, including £92.5m from acquisitions.

Lex, Page 14

# MGN back in profit

By Raymond Snoddy in London

Mirror Group Newspapers, the UK newspaper group, yesterday celebrated its independence from administrators and the legacy of the late Robert Maxwell by announcing higher-than-expected pre-tax profits of £131.9m ($192.57m).

The turnround from a loss of £88.7m in 1992 included an exceptional gain of £58.1m, against charges of £121.2m. The group was able to release provisions of £60.8m as more money was recovered for plundered pension funds.

Sir Robert Clark, chairman, said 1993 had been "a year of success and transformation for Mirror Group Newspapers".

Trading profits rose 19 per cent to £115.9m on turnover up 2 per cent at £476.1m for the 53 weeks to January 2. Profits before tax and exceptionals were £73.8m, against £32.5m.

Underlying earnings per share rose to 15.1p from 5.8p and the company planned to resume dividend payments.

The strengthening of MGN's balance sheet – net borrowings during the year fell from £392m to £335m – meant that the company intended to return to the banks to restructure and negotiate more medium and long-term debt.

Lex, Page 14

# Dana Corp buys 47% stake in Kolbenschmidt

By Christopher Parkes in Frankfurt

Dana Corporation of the US has agreed to buy a 47 per cent stake in German vehicle components maker Kolbenschmidt from the troubled Metallgesellschaft metals and engineering group.

No price was put on the deal, which is yet to be approved by cartel authorities and both companies' boards, but the agreement marks the biggest step so far in the promised sell-off at Metallgesellschaft. Dana, based in Toledo, Ohio, has annual sales of around DM8.6bn ($4.88m).

# Wolters Kluwer advances 23%

By Ronald van de Krol in Amsterdam

Wolters Kluwer, the Dutch publisher which is expanding rapidly overseas, posted a 23 per cent increase in net profit last year, with a large part of the rise due to a recent string of foreign acquisitions.

The company, which said yesterday that it expected to expand into five more European countries this year, saw net profit rise to Fl 318m ($165m) from Fl 258m in 1992. Turnover grew to Fl 2.62bn from Fl 2.36bn, while the dividend is to be raised to Fl 1.52 from Fl 1.32.

The importance of recent foreign expansion is reflected by the fact that more than half of last year's 21 per cent increase in operating profit was generated by companies acquired during 1993.

Mr Mijndert Ververs, chairman, said Wolters Kluwer, which specialises in professional, scientific and educational publishing, hoped to be able to announce deals in the Czech Republic and Hungary within the next few months.

The total spent on acquisitions in 1994 is likely to be less than the Fl 700m spent on acquisitions and fixed-asset investment in 1993, he said. But in keeping with last year, acquisitions in 1994 would be financed from internal resources.

Wolters Kluwer's biggest acquisition last year was the takeover of Sweden's Liber Group, which fits the company's strategy of expanding in countries that are poised to become increasingly involved with the European Union. This policy also lies behind its interest in eastern Europe.

The company expects to see a further increase in 1994 results, in line with its goal of achieving an average 15 per cent increase in profit per fully diluted share in the years until 1996. In 1996, it hopes to generate 70 per cent of its operating profit abroad, compared with 62 per cent in 1993. Turnover in 1996 is projected to increase to between Fl 3.3bn and Fl 3.5bn.

# IBM chief expects a gradual recovery

By Louise Kehoe in San Francisco

Mr Lou Gerstner, chairman and chief executive of International Business Machines, sees no quick fix for the computer company's financial woes. In the annual report to shareholders, Mr Gerstner says that IBM will recover "over time".

"It won't all happen overnight, but we are making significant progress," Mr Gerstner says in a letter addressed to "Dear Fellow Investor". He acknowledges, however, that "you wouldn't know it from looking at the financial results for the year [1993]."

IBM earlier reported net losses for 1993 of $8.1bn on revenues of $62.7bn. In 1992 the company recorded a $5bn loss on sales of $64.5bn.

Mr Gerstner charges that the company "failed to keep pace with significant change in the industry". It "has been too bureaucratic and too preoccupied with our own view of the world. We have been way too slow getting new things to the market," he states.

"We believe we can fix these problems because they are caused by us and not factors outside our doors," says Mr Gerstner, directly contradicting past statements by senior IBM managers who blamed IBM's problems on economic pressures and market turmoil.

Mr Gerstner, who last July stated that "the last thing IBM needs right now is a vision," now believes that "strategy is particularly important for IBM". He is expected to begin to reveal those strategies at an analysts meeting later this month.

IBM's plans, announced last July, to reduce its workforce by 35,000 by the end of 1995, are unchanged. "Based on current business conditions, we think that's about the right number," Mr Gerstner says.

Financial data revealed for the first time in the annual report point to IBM's mainframe computers as the crux of its problems. Revenue from mainframe computer hardware declined 27.6 per cent last year, to $10bn, while personal computer sales increased 23.3 per cent to $9.7bn.

The company's data storage products division reported a precipitous 18.2 per cent revenue decline to $5.1bn, while services revenues rose 32 per cent to $9.7bn.

The report also shows a sharp decline in European sales over the past year, with sales in the US and Asia Pacific regions increasing slightly.

Having outstripped the US for the previous two years, European revenues fell about 13 per cent to $21bn last year, from almost $24bn in 1992.

## Trans World Airlines

Following our report of March 9, we wish to make it clear that Trans World Airlines, which sought protection from creditors in November 1992, came out of Chapter 11 late last year.

# Brazilian mining group prospects for joint ventures

## Companhia Vale do Rio Doce is seeking international partners through its ADR programme, writes Patrick McCurry

A new American Depositary Receipt programme launched by Companhia Vale do Rio Doce (CVRD), the world's largest iron ore exporter, is meant to be a first step in a plan to finance new joint ventures with foreign companies.

The basic programme, under which the company's ADRs will be traded in the US over-the-counter market, is likely to lead to a new equity offering in the US next year.

This should help fund joint ventures with foreign companies, particularly in the pulp sector. The projects will need heavy capital investment in their early stages.

Mr Anastácio Fernandes Filho, financial director, says the company embarked on the ADR programme, launched last week, to attract foreign investors, and to increase its international profile and share liquidity. Currently foreigners own about 3 per cent of the capital.

"It will be easier to issue bonds or other securities with a wider investor base," he says.

Created during the second world war by Brazil, the US and the UK to supply the Allies with iron ore, and later taken over by the government, CVRD has always been regarded as an exception to Brazil's other federally-controlled giants.

While Brazilian governments considered areas such as telecommunications and oil production as strategically important, and took charge of key appointments, CVRD was given greater autonomy so that it could compete in international markets. As a result, its management has generally been more independent of political pressures.

Its strategy has been to exploit its huge landholdings and deposits by diversifying into other minerals, such as copper and gold. It has also moved into areas such as pulp and infrastructure.

The company's policy has usually been to grow through joint ventures with Brazilian and foreign companies, often offering exploitation rights towards the cost of the project.

These joint ventures, mainly in pulp, copper, kaolin and aluminium, have planned capital investment of about $1.5bn over the next five years.

"CVRD has not neglected its iron ore business, and has taken minority shares in areas where it lacks experience," says Ms Lika Takahashi, a research director with brokers Baring Securities Brasil.

Despite the company's strong natural advantages and efficient management, it has been hit by the world slump in commodity prices.

Net profits for the year to the end of December 1993 fell 12 per cent to $262m, while net sales were down slightly at $2.15bn. The company was also affected by increased interest costs on a yen loan at its Albrás aluminium joint venture. The appreciation of the yen against the dollar contributed to a loss of nearly $100m.

CVRD's rail and port network has now been developed to generate profits from outside users. The transport sector was its second-largest revenue source in 1993, providing 16 per cent of net sales. Iron ore and pellets still provide the majority of sales, accounting for 57 per cent last year.

Ashley Ashwood

Transport was CVRD's second biggest revenue source in 1993

Excluding the results of the yen appreciation and government tax credits, profits were about $200m, according to Ms Takahashi, who expects this figure to reach about $450m by 1996 if commodities prices recover. Partly because of the price slump, CVRD's shares appreciated by only 44 per cent in dollar terms last year, compared with an index gain of more than 100 per cent for the Sao Paulo stock exchange.

Following the launch of a restructuring programme in 1990, CVRD's workforce has been cut by a quarter to less than 18,000. Analysts expect continued improvements in efficiency, especially since the company won increased operational independence from the federal government, which still owns 51 per cent of shares, in 1992.

CVRD's restructuring followed a worrying pile up of debt in the late 1980s. It switched 25 per cent of its debt from the expensive and short-term local market to longer-term paper in international markets. Its current outstanding debt is about $1.5bn, a debt-to-equity ratio of 25 per cent, according to the company. However, very large debts in joint ventures such as the Albrás aluminium project are not consolidated.

According to analysts, the company will be open to criticism while it remains government-controlled. Although CVRD's management believes privatisation is inevitable, it is beset by political difficulties and has fallen off the agenda ahead of October's presidential elections.

Sao Paulo-based mining consultant Mr Juarez Fontana dos Santos praises CVRD as an efficient and low-cost producer.

Nevertheless he says the company remains over-centralised and bound by government-imposed restrictive legislation on public tenders that slow down decisions and purchases.

However, he maintains the company is attempting to become more flexible, and that more independence may be achieved if changes are approved under a congressional review of the constitution. This is under way, but may not be completed this year.

He says the company's priorities for this year are to develop its rail transport network by forming a group to bid for the privatisation of part of the federal railway system.

It also intends to be more aggressive in its main iron ore market. Last month, CVRD cut its ore prices to Japan, its largest market, in response to discounts offered by Australian competitors. "This year we'll be more aggressive, offering quicker delivery and better quality for certain kinds of ore," says Mr Fernandes.

# Avesta aims to raise SKr600m

By Hugh Carnegy in Stockholm

Avesta Sheffield, the Swedish-British steel producer, yesterday announced a SKr600m rights issue to back a programme of investments and restructuring designed to strengthen the group further after cutting losses sharply in 1993.

The company, formed in late 1992 from a merger of Avesta with the stainless steel interests of British Steel, said losses after financial items were reduced to SKr98m ($12.48m) last year from SKr574m in 1992. Sales were up 20 per cent to SKr14.2bn.

It said the improvement came in spite of generally weak demand, especially for its cold rolled products, hot rolled steel plate and tubes.

The reduced losses were attributed chiefly to merger synergies, the fall in value of the Swedish and British currencies and reduced employers contributions and energy taxes in Sweden.

No dividend will be paid, as was the case last year.

In January the company secured a five-year syndicated bank loan of $268.75m. The new financing will bolster Avesta Sheffield – 40 per cent owned by British Steel – as it implements a SKr600m investment and restructuring plan, provision for which was made in the 1993 accounts.

The plans include investment in a new continuous plate production plant in the US and the upgrading of melting shops in Sheffield and Avesta.

A melting shop in Degerfors in Sweden is to be closed down.

Avesta Sheffield said overcapacity in Europe continued to depress short and medium-term prospects for stainless steel, but stronger demand in the Far East and the US supported a forecast of long-term growth in consumption of 4-5 per cent a year.

The company's investment and restructuring plan should give a quick return by increasing productivity, reducing lead times and improving costs, it said.

# Chairman of LSE makes pitch for Chinese custom

By Tony Walker in Beijing

A strong pitch for Chinese companies to choose London when seeking an overseas listing was made yesterday by Sir Andrew Hugh Smith, chairman of the London Stock Exchange.

Opening an investment seminar in Beijing, he told bankers, securities managers and stock regulators that the London market had the breadth of experience and liquidity to benefit Chinese companies seeking overseas capital.

"Companies raise more money if they issue shares on a market like London's, where there is much investor interest and liquidity," said Sir Andrew.

The invisibles seminar, organised by the China-Britain Trade Group, was partly aimed at countering a trend among Chinese companies to look first at Hong Kong and New York when considering an overseas listing.

Some six mainland companies have listed in Hong Kong in the past year or so, and one of these – Shanghai Petrochemical – secured a joint listing in New York.

Another 22 Chinese companies, including a number from the power sector, are under consideration for overseas listings. Several have indicated an interest in floating their shares in London.

Sir Andrew, who will sign a memorandum of understanding with the Shanghai stock exchange to facilitate co-operation in trading and listing, said the London exchange would rationalise listing requirements to eliminate differences.

Seminar organisers said there was a good response from Chinese participants who indicated they had not been aware of the extent of business on the London market where some 200 new companies sought listings last year, raising $38bn in equity capital.

# Sotheby's well up at $20.6m in final quarter

By Richard Tomkins in New York

Sotheby's Holdings, the parent company of Sotheby's New York-based auction, finance and real estate operations, lifted net income to $20.6m in the fourth quarter of 1993 from $11.6m a year earlier on turnover of $103.7m, against $84.5m.

Net earnings per share rose to 36 cents a share from 21 cents.

For the full year, net income rose to $19.3m from $4m on turnover of $252.3m against $225m. Net earnings rose to 35 cents a share from 7 cents.

Auction sales for the year increased by 17 per cent to $1.3bn. Auction operating revenues rose by $34.1m to $235m and auction income before taxes jumped to $34.2m from $4m.

It sold about 163,000 lots in 1993, up 19 per cent from the previous year's 137,000.



NOTICE OF REDEMPTION

## MORTGAGE FUNDING CORPORATION NO. 1 PLC

### Class A-1 Mortgage Backed Floating Rate Notes Due March 2020

NOTICE IS HEREBY GIVEN to Bankers Trustee Company Limited (the "Trustee") and to the holders of the Class A-1 Mortgage Backed Floating Rate Notes Due March 2020 (the "Class A-1 Notes") of Mortgage Funding Corporation No. 1 PLC (the "Issuer") that, pursuant to the Trust Deed dated 31st March, 1988 (the "Trust Deed"), between the Issuer and the Trustee, and the Agency Agreement dated 31st March, 1988 (the "Agency Agreement"), between the Issuer and Morgan Guaranty Trust Company of New York (the "Principal Paying Agent") and others, the Issuer has determined that in accordance with the redemption provisions set out in the Terms and Conditions of the Class A-1 Notes, Available Capital Funds as defined in the Terms and Conditions in the amount of £1,500,000 will be utilized on 31st March, 1994 (the "Redemption Date") to redeem a like amount of Class A-1 Notes. The Class A-1 Notes selected by drawing in lots of £100,000 for redemption on the Redemption Date at a redemption price (the "Redemption Price") equal to their principal amount, together with accrued interest thereon are as follows:

OUTSTANDING CLASS A-1 NOTES OF £100,000 EACH BEARING THE DISTINCTIVE SERIAL NUMBERS SET OUT BELOW

Bearer Notes

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 116 | 475 | 535 | 562 | 697 | 799 | 995 | 1029 | 1041 |
| 1044 | 1081 | 1370 | 1505 | 1512 | 1580 | | | |

The Class A-1 Notes may be surrendered for redemption at the specified office of any of the Paying Agents, which are as follows:

Morgan Guaranty Trust Company of New York
PO Box 161, 60 Victoria Embankment
London EC4Y 0JP

Union de Banques Suisses (Luxembourg) S.A.
36-38 Grand-rue
L-2011 Luxembourg

Morgan Guaranty Trust Company of New York
Avenue des Arts 35, B-1040 Brussels

Morgan Guaranty Trust Company of New York
55 Exchange Place, Basement A
New York, New York 10260-0023
Attn: Corporate Trust Operations

In respect of Bearer Class A-1 Notes, the Redemption Price will be paid upon presentation and surrender, on or after the Redemption Date, of such Notes together with all unmatured coupons and talons appertaining thereto. Such payment will be made (i) in sterling at the specified office of the Paying Agent in London or (ii) at the specified office of any Paying Agent listed above by sterling cheque drawn on, or at the option of the holder by transfer to a sterling account maintained by the payee with, a Town Clearing branch of a bank in London. On or after the Redemption Date interest shall cease to accrue on the Class A-1 Notes which are the subject of this Notice of Redemption.

MORTGAGE FUNDING CORPORATION NO. 1 PLC
By: Morgan Guaranty Trust Company
*as Principal Paying Agent*
Dated: 16th March, 1994

NOTICE

Withholding of 31% of gross redemption proceeds of any payment made within the United States is required by the Internal Revenue Code of 1986 and amended by the Energy Policy Act of 1992 unless the paying agency has the correct taxpayer identification number (social security or employer identification number) or exemption certificate of the Payee. Please furnish a properly completed Form W-9 or exemption certificate or equivalent if presenting your Class A-1 Notes to the paying agency's New York Office.

Prices for electricity determined for the purposes of the electricity pooling and settlement arrangements in England and Wales.

| ½ hour period ending | Provisional Prices for Trading on 16.03.94: Pool purchase price £/MWh | Final Prices for Trading on 15.02.94: Pool purchase price £/MWh | Final Prices for Trading on 15.02.94: Pool selling price £/MWh |
|---|---|---|---|
| 0030 | 10.83 | 17.09 | 17.09 |
| 0100 | 15.52 | 18.61 | 20.40 |
| 0130 | 15.56 | 18.97 | 20.76 |
| 0200 | 15.56 | 18.66 | 20.45 |
| 0230 | 15.50 | 18.97 | 20.76 |
| 0300 | 15.50 | 18.66 | 20.45 |
| 0330 | 15.50 | 17.15 | 17.15 |
| 0400 | 10.81 | 17.14 | 17.14 |
| 0430 | 10.82 | 17.09 | 17.09 |
| 0500 | 10.82 | 17.06 | 17.06 |
| 0530 | 10.95 | 17.06 | 17.06 |
| 0600 | 10.95 | 17.06 | 17.06 |
| 0630 | 10.97 | 17.09 | 17.09 |
| 0700 | 15.60 | 19.38 | 21.17 |
| 0730 | 14.29 | 19.75 | 21.54 |
| 0800 | 14.64 | 19.77 | 21.56 |
| 0830 | 14.64 | 19.83 | 21.65 |
| 0900 | 14.66 | 22.11 | 23.97 |
| 0930 | 14.66 | 53.94 | 55.82 |
| 1000 | 14.67 | 53.35 | 55.82 |
| 1030 | 14.67 | 38.22 | 40.07 |
| 1100 | 14.67 | 22.01 | 23.84 |
| 1130 | 16.28 | 21.98 | 23.80 |
| 1200 | 16.27 | 21.97 | 23.79 |
| 1230 | 16.26 | 21.96 | 23.78 |
| 1300 | 16.23 | 21.92 | 23.73 |
| 1330 | 14.64 | 19.41 | 21.21 |
| 1400 | 14.29 | 19.01 | 20.80 |
| 1430 | 14.29 | 18.98 | 20.77 |
| 1500 | 14.29 | 18.97 | 20.77 |
| 1530 | 13.67 | 18.98 | 20.77 |
| 1600 | 14.29 | 19.04 | 20.84 |
| 1630 | 14.64 | 21.52 | 23.36 |
| 1700 | 14.30 | 23.56 | 25.76 |
| 1730 | 14.65 | 37.15 | 39.97 |
| 1800 | 14.65 | 38.98 | 42.04 |
| 1830 | 16.33 | 38.15 | 41.06 |
| 1900 | 16.28 | 35.10 | 37.47 |
| 1930 | 16.42 | 23.02 | 24.99 |
| 2000 | 16.30 | 22.19 | 24.02 |
| 2030 | 16.22 | 19.01 | 20.90 |
| 2100 | 14.84 | 18.98 | 20.77 |
| 2130 | 15.67 | 18.96 | 20.76 |
| 2200 | 15.83 | 18.80 | 20.59 |
| 2230 | 15.58 | 17.14 | 17.14 |
| 2300 | 10.97 | 17.04 | 17.04 |
| 2330 | 10.89 | 16.99 | 16.99 |
| 2400 | 10.84 | 16.98 | 16.98 |

Prices are determined for every half-hour in each twenty-four hour period. Prices are in pounds per megawatt-hour, rounded to two decimal places. To convert prices to pence per kilowatt-hour the decimal point should be moved one place to the left, eg £18.80/MWh becomes 1.880p/kWh. Provision for the determination of pool prices is made in the Pooling and Settlement Agreements which govern the operation of the electricity pool in England and Wales. The Pool Purchase Price is the base of the majority of payments made to generators in respect of electricity traded through the pool. The calculation of pool prices is a highly complex process the product of which is subject to revision or correction and sometimes major alterations until final pool prices are determined approximately twenty-four days after the day of trading. Accordingly, due to the possibility of their revision and/or correction, no reliance should be placed upon provisional pool prices for any day being the same as final pool prices for that day. Final pool prices are also capable of revision. Pool Selling Price is the price paid by purchasers of electricity under the pool trading arrangements. It is dependent upon the determination of Pool Purchase Price. Further information on pool prices is provided on behalf of the Pool by Energy Settlements and Information Services Limited. Anyone wishing to receive such information should telephone [illegible] between 8.30am and 5.15pm Monday to Friday.
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# Earnings at Générale de Banque up 8% for year

**By Gillian Tett in Brussels**

Consolidated profits at Générale de Banque, Belgium's largest bank, rose by 8 per cent last year to BFr11.6bn ($333m), up from BFr10.7bn in the previous 12 months.

Mr Ferdinand Chaffart, chief executive, yesterday claimed that all the branches of the bank's activities had contributed to the growth, which was broadly in line with market expectations.

However, he noted that the bank had benefited in particular from falling interest rates which had boosted financial markets and stock exchanges.

In spite of an overall drop in loans, private sector lending rose by 4.5 per cent last year. Meanwhile, gross income had risen by 14 per cent as a result of an expansion of the group's investment funds and foreign exchange activities, coupled with the realisation of capital gains on government bonds and the bank's recent sale of its stake in ABN-Amro, Mr Chaffart added.

The board of directors has proposed an increase in net dividend to BFr340 from BFr320. With the bank hoping to benefit further from a weak D-Mark, in spite of uncertainties about the scope for further German rate cuts, Mr Chaffart said he remained "optimistic" about the prospects for further growth next year.

# Finmeccanica reduces holding

**By Sara Webb**

Finmeccanica, the Italian state-controlled engineering group, is further reducing its stake in its quoted Ansaldo Trasporti subsidiary, in a transaction expected to raise up to L72bn ($43m).

Lehman Brothers and Paribas Capital Markets were appointed joint lead managers yesterday for the placement of 10.6m ordinary shares in Ansaldo Trasporti with international investors. Finmeccanica's stake will fall to 50.1 per cent from 63.6 per cent.

The world's most profitable software company is to refocus on global marketing, writes **Alan Cane**

# Microsoft regroups to get closer to its customers

Mr Bill Gates, co-founder and chairman of Microsoft, the world's largest personal computer software company, has nightmares in which his competitors outsmart and overwhelm him in his bid to dominate the software business in the home and office.

That fear must have played a part in the decision, announced in the US last night, to reorganise Microsoft from top to bottom.

A memorandum to employees signed by Mr Gates, Mr Steve Ballmer and Mr Mike Maples, who collectively make up Microsoft's "office of the president" spells out the worry: "We are trying to reach new customers and partners. Competitors like Lotus, Novell and Electronic Arts are more focused.

"To continue to be a leader we need to innovate not only in our products but in our sales, marketing and operations. We cannot just follow and react to what others are doing."

Lotus Development Corporation developed the best selling spreadsheet 1-2-3 and market leading software for workgroups "Notes". Novell markets the most popular PC networking software.

What is striking about Microsoft's decision to reorganise is that, unlike other companies forced to restructure because of falling sales or trading losses, it remains the world's most profitable software company.

In 1993 it reported net income of $953m on sales totalling $3.75m.

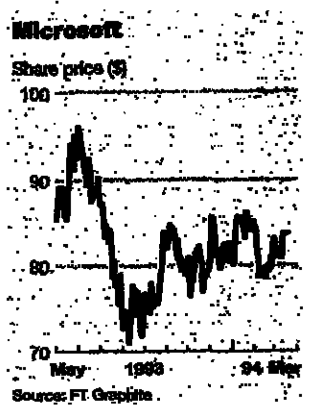
Its success is based on a broad range of market leading software packages, but especially on MS/DOS and Windows, the operating systems used by 90 per cent of the world's 100m personal computers.

Microsoft says that if it is to continue growing, it needs a fast, responsive organisation focusing on the customer's needs.

Among the changes called for in the plan are:

- Microsoft's core technologies must be shared across the company to achieve economies of scale and offer customers greater consistency.
- The company's product strategy has to be simplified. The memorandum says: "We are overloading the market with lots of complex messages. We need to develop clear themes that pull together what we say about our products."

This is taken to be a reference to confusion in the marketplace over Microsoft's advanced Windows N/T operating system and its derivatives codenamed Daytona and Cairo.



Source: FT Graphite

Products are to be grouped in seven divisions: personal operating systems, business systems and workgroup applications, desktop applications, consumer applications, software developer systems, advanced consumer technology and on-line services.

- Sales activities will be grouped into three customer units to give greater customer focus: "We will align all worldwide sales and marketing people with one of three customer types: end users, organisations, or other equipment manufacturers. People within these customer units will live, eat and breathe with their customers," the memorandum says.
- A renewed focus on the competition: "We must understand not only competitors' products but also their sales strategies, marketing strategies, localisation strategies and so on. We must be aggressive in taking legitimate competitive actions."

The memorandum goes on to say the company has to make decisions faster and be more efficient in marketing, sales and support: "It must be clear that it is better to take action, make mistakes and be forgiven than to wait and ask for permission."

The memorandum makes clear the company is planning on a global basis.

In the past, product marketing groups were focused primarily on the US market and subsidiaries had to develop their own marketing programmes.

"In the future we will create global marketing programmes that can be efficiently deployed in local geographies."

The company denied that subsidiaries would become less independent, arguing that it would collect information from its subsidiaries in developing global marketing strategies.

# Mutual fund takeover bid lights up Wall Street

**Richard Waters** examines the implications of the uninvited offer from GE Capital for Kemper

The prospect of a second big takeover in the mutual fund business in the US in a matter of months lit up Wall Street yesterday.

Shares in Kemper, the Chicago-based asset management, life insurance and broking company, leapt by 50 per cent, or $20¼, from Monday's close on an uninvited bid from GE Capital.

The sharp move pushed Kemper's market value up to nearly $2.5bn, above GE Capital's offer valued at $2.2bn. It signalled Wall Street's belief that either the General Electric subsidiary would have to offer more or the approach would prompt a rare bidding war for the financial services company.

The bid approach from GE Capital follows Mellon Bank's $1.8bn acquisition of Dreyfus, which marked the most aggressive move yet by a US commercial bank to enter the booming funds business. The share prices of other mutual fund groups also jumped yesterday, on expectations of further deals. Franklin Resources, for instance, rose $1⅛, to $48⅛.

GE's approach came in a letter from Mr Jack Welch, chairman of the US group, to Mr David Mathis, his opposite number at Kemper. Although written on March 2, it was only made public by GE yesterday in an apparent move to put pressure on Kemper's board to accept the deal.

It could also be designed to force a decision before any rival suitor has a chance to make a move. The market has been rife with rumours of an approach for Kemper since the Dreyfus deal.

Banco Santander, the Spanish bank which took a 3 per cent stake in Kemper in the late-1980s, is one name frequently mentioned – although its potential involvement in a rescue bid for domestic rival Banesto could give its management more than enough to think about in the months ahead.

Other US domestic banks, seeking to emulate Mellon, are also seen as possible bidders.

GE's approach has caught Kemper's management in an unenviable position. The company is only just emerging from a period overshadowed by problem real estate investments.

**US MUTUAL FUND GROUPS**

| Assets (end 1993) | $bn |
|---|---|
| Fidelity | 251.5 |
| Vanguard | 134.9 |
| Merrill Lynch | 124.6 |
| Capital Research | 105.1 |
| Franklin/Templeton | 94.0 |
| Dreyfus | 75.0 |
| Federated Investors | 68.6 |
| TIAA-CREF | 61.1 |
| Putnam | 61.1 |
| Dean Witter | 60.7 |
| Smith Barney Shearson | 56.5 |
| Prudential | 54.4 |
| IDS | 45.7 |
| Kemper | 44.4 |
| T Rowe Price | 37.4 |
| Scudder | 35.1 |

Source: Investment Company Institute

Last year, Kemper sold off its reinsurance operations, and earlier this year completed its exit from the property/casualty business.

In the view of several analysts, it could be on the verge of a rebound in earnings – although its stock price before GE's approach became public seemed not to reflect this.

At around $40, the shares earlier this week were trading on a multiple of around 12 to 13 times most analysts' expectations of earnings this year, considerably lower than other companies in the sector.

Mr Michael Blumstein, of Morgan Stanley, estimates earnings this year of $3.75 a share, rising to $4.40 in 1995 – a view echoed in a recent research note from Allen Nadler at Merrill Lynch.

Ironically, it was the disposal of the reinsurance business which first left Kemper vulnerable to a bid.

The sale involved the cancellation of most of the 38 per cent stake in Kemper owned by the Lumbermen's Mutual Casualty Company, wiping out a potentially supportive holding.

It is not surprising that Kemper's management team, having dealt with the problems of the early-1990s, have not welcomed GE's bid. "They hate the fact that someone else will come in and take the credit [for their efforts]," said one person close to the company.

Kemper's business now comprises three parts: a mutual fund business, with $44bn under management; a life assurance operation specialising in annuity business; and a regional securities brokerage. The company abandoned efforts to sell its underperforming securities arm last year, after it failed to attract a high enough bid.

For GE Capital, a Kemper acquisition would provide a springboard into the fastest-growing areas of the US retail investment business – mutual funds and variable annuities.

**The share prices of other mutual funds groups also jumped**

Kemper has $70bn in all under management, which together with GE's $75bn would create one of the US's biggest fund management groups.

In a clear attempt to win the backing of Kemper's management, Mr Welch in his letter dangled the carrot of a consolidation of all the asset management activities under the Kemper umbrella, run by its existing managers – although under the wing of GE Capital.

The all-cash bid of $55 a share values the group's outstanding ordinary shares at $1.8bn, and would be worth $2.2bn after taking into account convertible preferred stock and stock options.

While leaning heavily on Kemper's board before it meets this Thursday, GE seems unwilling at this stage to launch an all-out contested bid.

Such an attack would be extremely rare in the financial services business. An unwanted deal would run the risk of driving away Kemper's best people.

It would also have to win the backing of state insurance regulators. In addition, mutual fund groups have a powerful poison pill at their disposal: the boards of each fund run by the group could vote to have their assets managed by another company.

If that were to happen, a contested GE takeover would become a hollow victory.

# Fannie Mae in scheme for low-income borrowers

**By Patrick Harverson in New York**

The Federal National Mortgage Association (Fannie Mae) yesterday launched an initiative to provide $1,000bn in mortgage financing over the next seven years to help low-income families in the US buy their own homes.

The initiative comprises a series of programmes to provide more information to potential homebuyers, making it easier for low-income or disadvantaged families to win approval for a mortgage loan, and ending racial discrimination in the lending process.

By the end of the decade, Fannie Mae hopes to have provided $1,000bn in financing to mortgage providers, and helped 10m families buy homes.

The company is the largest provider of mortgages in the US. It does not sell mortgages directly to homebuyers, but rather invests in mortgages sold by mortgage companies, savings and loan institutions and banks.

Fannie Mae said it would direct the programmes at low and moderate-income families, minority groups, new immigrants to the US, people living in inner-city areas or neglected communities, and people with special housing needs.

# Newsprint group halves its deficit

**By Robert Gibbens in Montreal**

Stone-Consolidated, the newsprint arm of Chicago's Stone Container, halved its losses in 1993. It said prices in the US were improving and inventories declining.

The 1993 loss was C$68.7m (US$51.2m) down from C$110m in 1992 on sales of C$928m, up 10.4 per cent. Paper shipments were 1.3m tonnes, up from 1.25m. The company said costs had been reduced and strong timber prices and a lower Canadian dollar had helped.

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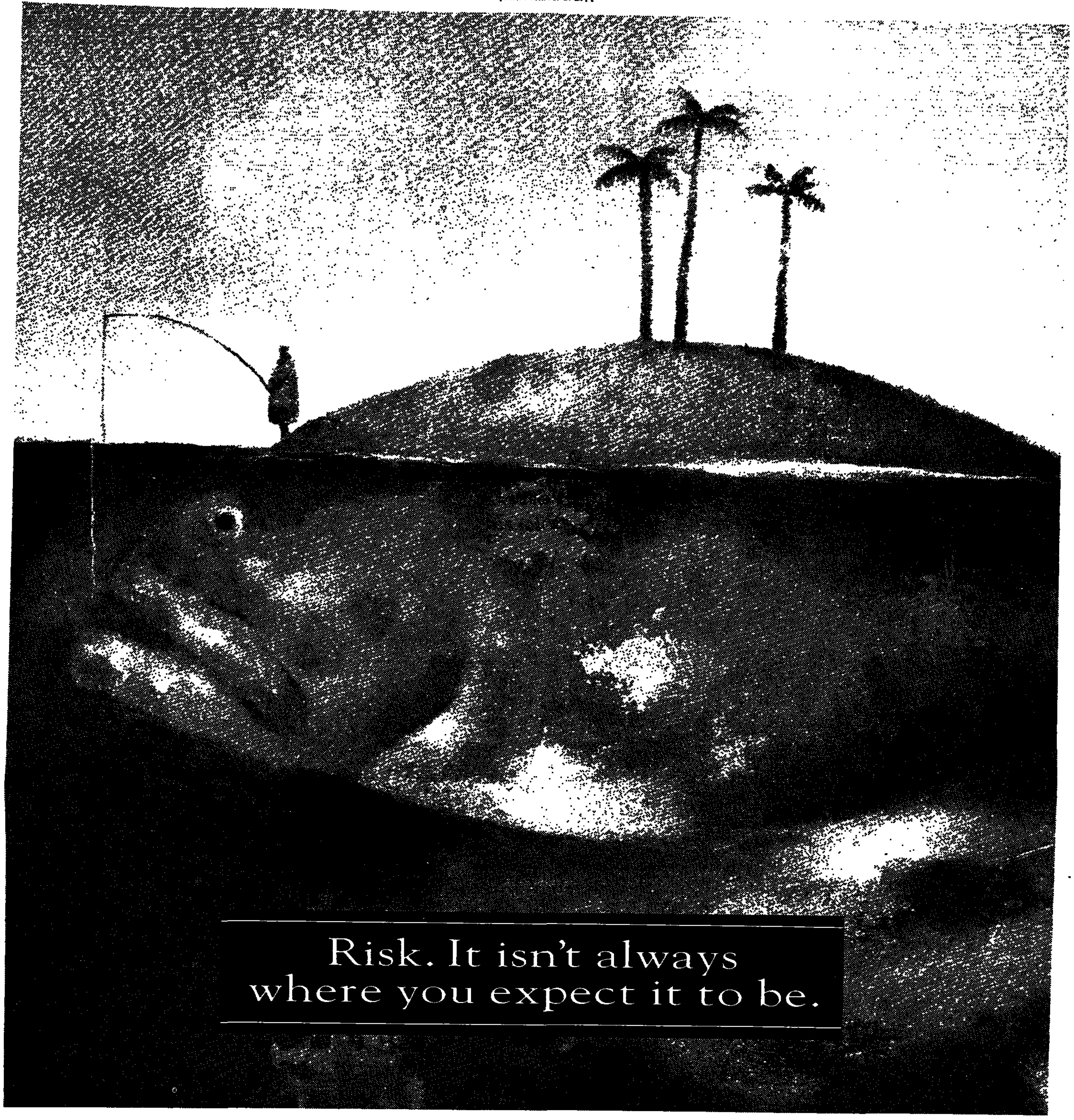


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## INTERNATIONAL COMPANIES AND FINANCE

# Chinese group powers on with HK float

**Simon Holberton** visits Dongfang, a leading maker of power generation equipment

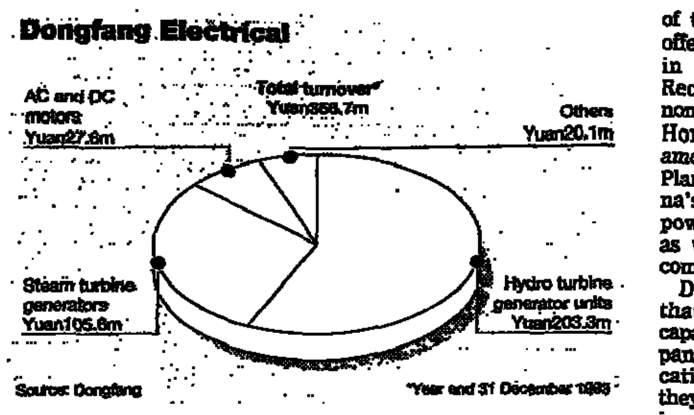
It takes nearly two and a half hours to travel the 59 kilometres from Chengdu, the provincial capital of Sichuan in China's south-west, to Deyang, the home of Dongfang *Electrical Machinery.*

Through a landscape undergoing a familiar transformation from agriculture to industry, the journey is enlivened by the anarchic quality of motoring in modern China. But it is one which the managers of Dongfang, China's third largest maker of power generation equipment, hope will not deter investors.

The company expects to be floated on the Hong Kong stock exchange next month – the eighth of the first nine companies which the Chinese government nominated last year for listing outside China – with an issue of about 125m "H" shares.

Nomura, the Japanese securities house which is the lead manager, estimates that this offering to foreign investors, which is equal to 25 per cent of Dongfang's capital, will raise about HK$350m (US$45m). A slightly smaller percentage of the company will be issued in the form of "A" shares to *mainland Chinese investors* and listed on the Shanghai stock exchange.

In the Hong Kong stock broker jargon, Dongfang is an "infrastructure play", a "warrant" on the fast-growing Chinese economy. The company appears well positioned. According to Dongfang, it has a 40 per cent share of the Chinese market for hydroelectric power generating equipment and a 25 per cent share of the country's steam turbine generator market.




Overall it has a share of 30 per cent of the Chinese power engineering market – a market which still has plenty of room to mature. Electrification touches only 67 per cent of households in China, compared with 80 per cent in Thailand and 82 per cent in India.

*Moreover, if China is to sustain economic growth rates of* around 10 per cent a year it desperately needs more electric power plants. On current trends, demand for electric power is set to double between now and 2000. According to Mr *Jacky Chiu*, an analyst at Nomura Research Institute, this means adding an extra 20,000MW of generating each year. But the gap between China's need and its capacity to meet that need is large. The production capacity of the three mainland manufacturers is only 10,000MW to 12,000MW a year.

"As the Chinese government has designated that most of the annual requirement for power generation capacity should be satisfied locally, local manufacturers have to increase substantially both production capacity and technological levels in the next few years," Mr Chiu wrote recently.

Underlining the need for rapid development of the power industry is the decision of the Chinese government to offer foreign investors stakes in other power companies. Recently 22 companies were nominated for foreign (mostly Hong Kong) listings and *among them is Harbin Power* Plant Equipment Group, China's biggest manufacturer of power generating equipment, as well as four power supply companies.

Dongfang's managers say *that increasing productive* capacity and raising the company's technological sophistication are the main benefits they see coming from the listing in Hong Kong.

According to Mr Chen Weijian, general manager, Dongfang plans to invest Yn920m ($105m) over the next three years in increasing the capacity of Dongfang's works.

Of this, the lion's share (Yn670m) will go to upgrade its technology in hydro power production. By 1997 it wants to increase production capacity of its hydro generators to 1,600MW from 600MW. A smaller amount (Yn250m) will be allocated to increase the production of steam turbine generators with capacities of 300MW and 600MW.

Dongfang needs an *infusion* of capital for expansion. Its order book is full until the end of 1996. Not only that but by that time China's biggest hydroelectric development – the Three Gorges project on the Yangtze river – is expected to be well under way.

When completed the Three Gorges will be the world's largest lake and hydroelectric *power system*. In its first phase the project will consist of 26 700WM units. Although Dongfang will be just one of the suppliers to the project company executives expect the Three Gorges to underwrite its *future for many years to come.*

In pursuit of technology, the company is exploring joint venture possibilities with European and North American power generation *equipment manufacturers.* Dongfang is holding preliminary discussions with GE Canada about a joint venture in hydroelectric power, and it recently signed a draft memorandum of understanding with Siemens.

This gives the German manufacturer 51 per cent of a *steam turbine assembly* and test factory. Siemens will put up DM26m for its share of the business while Dongfang will *provide the land* and erect the factory. Executives expect the joint venture to be operational *in* 1995.

As Mr Rao Fangquan, a deputy general manager, observed: "The most important aspect of a joint venture is not the capital but the technology, so our company can develop."

# NKK *to cut* 1,300 more jobs in restructure

By Michiyo Nakamoto in Tokyo

NKK, the Japanese steel company, plans a wide-ranging restructuring aimed at reducing employees by a further 1,300 and increasing profits by Y175bn ($1.65bn) *over the next three* years.

The company, which faces heavy losses this year, says the restructuring is intended to return the company to profit so that *it can resume dividends by* 1995-96.

Earlier this month, the company revised its earnings estimate for the year ending this month and said that it expects pre-tax losses of *Y25bn.*

The company is being forced to pass its dividend for the first time since it was stock market listed in 1949.

Mr Shunkichi Miyoshi, president, said NKK aimed to increase its ratio of profits to sales in the engineering division *to 5 per cent from* the current 3 per cent.

Under the plan, NKK will cut capital spending to a third of levels seen over the past three years, or about Y140bn.

*Steelmaking operations* will be streamlined by reducing the product range, integrating production of some products at one plant and shifting production of other products to an affiliated electric furnace steel maker.

The latest plan brings the total number of employee cuts *to 4,500. Last year,* NKK said it would reduce employee numbers by 3,200 by fiscal 1995.

Reductions would be achieved through transfers to subsidiaries, cuts in graduate employees *and natural* attrition.

NKK expects to continue its operations in electronics and property development which are two areas the company has been working in.

It also hopes to increase its involvement in south-east Asia where it is considering local production of *steel or joint* ventures depending on the needs of each particular country.

The restructuring plan is not expected to affect National Steel, the US company in which NKK has a 50 per cent equity stake.

National Steel itself is *beginning to enjoy the fruits* of its own restructuring, Mr Miyoshi said, and NKK hopes to support the running of National Steel by its US management.

# Banks warn of Haka exposure

By Christopher Brown-Humes in Stockholm

Three leading Finnish banks, struggling to recover from the country's financial crisis, warned yesterday that they faced further big credit losses after the Haka construction group filed for bankruptcy.

Unitas, the country's second largest banking group, said the collapse could produce write-offs of up to FM450m, but it stressed *that this did not alter* its forecast of a substantially reduced deficit in 1994. It said its total exposure to Haka amounted to around FM1.2bn.

Kansallis-Osake-Pankki, Finland's largest bank, said it would suffer a loss of no more than FM200m from the bankruptcy. It added that the amount would be covered by a FM900m provision, taken last year, for unidentified bad loans. Its claims on Haka companies total FM815m.

A third bank, Postipankki, estimated potential credit losses at FM300m, although its total exposure amounts to just over FM800m. It said the nominal value of its collateral was more than FM750m.

*"The final credit and guarantee losses* are dependent upon both the successful liquidation of the collateral as well as the orderly completion of on-going projects," Postipankki stated.

● Rautaruukki, the Finnish state-controlled steel group, yesterday unveiled a FM144m ($26m) profit after financial items for 1993, a sharp turnround on the FM697m loss reported *for the previous year.*

It benefited from firmer steel prices, cost-cutting and the weaker Finnish markka. But the result was held back by high financing costs, lower demand in western Europe, and continued losses at the company's Transtech rolling stock unit. The group said it *would not pay a dividend for* the third consecutive year.

Operating profits after depreciation were FM829m, or 11.8 per cent of sales of FM7.01bn. This compares with profits of FM454m on turnover of FM6.50bn a year earlier.

# Ball bearing makers agree supply deals

By Victor Mallet in Bangkok

Minebea of Japan and FAG Kugelfischer of Germany, the two ball bearing manufacturers recently hit by heavy losses, are to supply each other with bearings in order to reduce their investment and production costs.

*Under the agreements* – signed in Thailand, where Minebea has its largest factory – Minebea will supply FAG with miniature and small ball bearings, while FAG will supply Minebea with small and medium-sized bearings.

The two companies will also *swap* technical knowhow.

They said they would notify the European Commission of the deal to obtain clearance under the European Union's competition rules.

Executives from Minebea, which is particularly strong in Asia, and FAG, with its European base, said each company would continue to market products separately using its own brands.

*"Each company* will benefit from the manufacturing strengths of the other," said Mr Goro Ogino, Minebea president, in a statement, "and both companies will be able to realise important cost savings at the capital investment and manufacturing level".

Mr Peter-Juergen Kreher, chairman of FAG's management board, said: "Today's agreements represent a vital opportunity for us both to ensure our ability to deliver a wider range of ball bearing products at the lowest possible cost."

According to the deal, Minebea will supply bearings with an outer diameter of up to 24mm, while FAG will supply those with diameters between 24 and 35mm.

Both companies have undergone extensive restructuring. Minebea's net loss was Y61.21bn ($578m)in the year to September 30, 1993, while FAG reported a net loss of DM439m ($360m) in 1992.

# Santos nearly doubles earnings

By Nikki Tait in Sydney

Santos, the Adelaide-based oil and gas company, reports a near doubling of after-tax profits to A$219.3m (US$157.5m) for 1993. In the previous year, *profit after abnormals* was A$112.7m.

In part, the sharp improvement was due to a turnround on abnormals. In 1993, Santos booked a net gain of A$34.9m, reflecting a A$46.6m surplus on the sale of the company's shares in Sagasco, which was taken over by Boral last year, a *A$44.1m gain from tax-related* matters, and a A$55.8m write-down of capitalisation exploration expenditure. In the previous year, there was a A$49.9m abnormal charge.

Santos also benefited from lower tax and interest charges, with the latter falling to A$38.2m from A$50.3m. Earnings *before interest* and tax in 1993 stood at A$327.4m, marginally below 1992's A$322.2m.

## INTERNATIONAL CAPITAL MARKETS

# German rate hopes spur big gains across Europe

By Conner Middelmann in London and Frank McGurty in New York

European government bonds put on another strong performance yesterday, boosted by hopes of a more rapid easing in German interest rates.

### GOVERNMENT BONDS

Firmer US Treasuries lent added support, although they underperformed their European counterparts, Mr Ifty Islam, an economist at Merrill Lynch said. The yield gap between the higher-yielding US 10-year benchmark and its German counterpart widened to 39 basis points, from 30 basis points on Monday and 24 on Friday.

Retail activity remained subdued, with investors awaiting today's allocation of the Bundesbank's securities repurchase agreements, UK retail sales and employment numbers, and US consumer price data.

However, some traders reported substantial buying of German, French and Dutch bonds by US hedge funds.

■ Hopes for accelerated Bundesbank easing gave German bunds a strong boost, with 10-year maturities gaining more than a point.

Looking to the Bundesbank's repo allocation, most dealers are calling for a slightly larger drop in the minimum repo rate than the three-basis-point declines of the last two weeks.

"Given the current level of liquidity [in the money market] and the overnight money rate, the drop in the repo rate could be slightly bigger this time," said Ms Irgeen Rust, economist at Westdeutsche Landesbank Girozentrale in Düsseldorf. Most traders are betting on a reduction of between five and seven basis points, with some calling for a 10-basis point ease.

The market was also abuzz with speculation over Thursday's Bundesbank council meeting. As it is the last meeting before the central bank's Easter break, there was some talk that it might announce fixed-rate repos at lower rates for the following weeks. The next council meeting is scheduled for April 14.

■ UK gilts also gained more than a point, boosted by strong bond markets elsewhere and the latest Confederation of British Industry survey indicating that UK retail sales slowed in February from January. Full sales data will be released today, along with key employment numbers.

Meanwhile, traders expect the Bank of England to announce its next gilt auction on Friday. Most are looking for an issue of medium-dated paper, possibly the 6 per cent gilts due 1999. The June long gilt future rose 1⅜ point to 113.

■ Italian bonds put on the strongest performance of the day, helped by the successful five-year bond auction and short-covering in the futures market. The June BTP future jumped 1.62 point to 112.17.

However, according to Mr André de Souza, market strategist at PaineWebber, the rally "was not investor-driven – it was more of a catch-up," retracing the losses of the recent global sell-off, when Europe's high-yielders suffered most.

■ Japanese bonds weakened in Tokyo, pressured by a lacklustre two-year auction and worries of further supply. However, they steadied in London trading. The June JBG future dropped 0.68 point to 110.22 in Tokyo, but slipped only 0.02 point in London.

■ The US Treasury market took a measure of encouragement yesterday morning from a keenly-awaited report on producer prices. However, the positive sentiment was tempered by concern over stronger-than-expected industrial production in February.

By midday, the benchmark 30-year government bond was $\frac{11}{16}$ ahead at $91\frac{29}{32}$, with the yield slipping to 6.89 per cent. On the short end, the two-year note was $\frac{1}{16}$ better at $99\frac{25}{32}$, to yield 4.929 per cent.

Despite the gloomy mood of the market in recent weeks, traders were able to look past a disconcerting headline figure in the Labor Department's producer price report.

The overall index showed a 0.5 per cent increase, a little worse than analysts had forecast, but most of that gain was attributed to a weather-related 2.8 per cent rise in energy prices. The core PPI, excluding energy and food, showed a tame 0.1 per cent rise, against expectations of 0.3 per cent.

Prices across the yield curve improved on the news, but slipped back soon after the government reported that industrial production was up 0.4 per cent last month, twice as much as the experts had predicted. Worse still, capacity utilisation, a closely watched barometer of inflation, came in at 83.4 per cent, well above the consensus estimate.

# Regulatory pact marks new era in derivatives trade

## The UK-US agreement comes at a vital time, writes Laurie Morse

Yesterday's news of a pact to co-ordinate regulatory overseeing of over-the-counter derivatives trading in the US and UK came as two of the world's most influential groups of traders prepared to open annual meetings in the US.

The International Swaps and Derivatives Association (ISDA) opens it meeting in Chicago today, while international derivatives regulators, and representatives of the exchange-traded derivatives community are meeting in Boca Raton, Florida.

Both organisations have put regulatory issues and international co-operation at the top of their agendas. Although the two groups see themselves as distinct and often at odds in competing for the world's risk-management business, yesterday's regulatory announcement shows that the borders between the two groups have blurred considerably.

The future, and the sustained growth of global derivatives trading – on and off listed exchanges – hinges on the regulatory decisions of a variety of countries. International bank regulators are busy formulating capital adequacy requirements, disclosure rules, and special accounting that includes transaction netting.

With their agreement, the Securities and Exchange Commission, the UK's Securities and Investment Board, and the Commodity Futures Trading Commission have demonstrated they want to join the bank regulators' discussion, and have put the over-the-counter swaps dealers on notice that they (the regulators) must be reckoned with.

For the Commodity Futures Trading Commission, which is facing reauthorisation this year, its co-operative efforts with the SEC and the SIB may help head off Congressional criticism of its handling of exemptions for certain energy derivatives. Added to this is the fact that it has, at times, seemed ill-prepared to deal with a truly global futures and derivatives crisis.

After four years of fractious debate, Congress gave the CFTC limited overseeing of OTC derivatives in 1992, and promised to revisit their regulatory treatment this year. The CFTC's initiative with the SEC may give legislators, who have grown to understand the value of derivatives, more confidence in the agency.

Taken unawares by the securities regulators' initiative, ISDA leaders had been bracing this week for the release of another regulatory study on the derivatives business.

Washington's General Accounting Office is overdue to release an extensive examination on the industry. The GAO is known for its tough and controversial reports, and is not expected to soft-hand derivatives dealings like reports by industry groups such as the Group of Thirty.

After a year of such reports, and much discussion by legislators and bank regulators, the SIB-SEC-CFTC pact smacks of action and provides an agenda for co-operation on global OTC derivatives regulation.

# Rarity value helps launch New Zealand's FRN deal

By Antonia Sharpe

New Zealand's rarity value in the international bond market, combined with the likelihood that Moody's is about to raise the country's credit rating, ensured a favourable reception for its widely-expected $1bn offering of five-year floating-rate notes (FRNs) launched yesterday.

### INTERNATIONAL BONDS

Mr Alex Jurshevski, head of portfolio management at New Zealand's debt management office, said the proceeds of the transaction would be used to refinance maturing debt, and would allow the sovereign borrower to call outstanding floating-rate debt.

He said New Zealand planned to call its $250m FRN offering due 1996 next week, and that it had already called an old issue of sterling-denominated FRNs, worth the equivalent of $200m.

Mr Jurshevski said although New Zealand actively used its $3bn Euro medium-term note programme, the government's intention to reduce the country's NZ$66.7bn foreign debt meant it would be depend even less on the Eurobond market for its funding in the future.

Mr John Orange, senior portfolio manager at the New Zealand debt management office, said the government's strategy reflected its desire to reduce the risk associated with foreign currency borrowing and its success in developing New Zealand's domestic bond market.

Joint lead managers Morgan Stanley and UBS said around 80 per cent of the notes had been sold by late afternoon. In eastern Asia, central banks and government agencies were strong buyers of the notes, attracted by their zero risk weighting for capital adequacy purposes.

Sales into Japan were limited, possibly reflecting a reluctance among investors to take on new commitments ahead of the close of the financial year at the end of this month. European sales were mainly to funds in Switzerland, Germany, the UK and Italy.

The coupon on the notes, of three-month Libor less ⅛, was in line with market expectations. When the notes were freed to trade, they were bid at the issue price of 99.78.

Hydro-Quebec is expected to launch a $500m offering of five-year notes today, via CS First Boston. The notes are likely to yield around 15 to 18 basis points over Libor.

Pemex, the Mexican oil company, raised $400m in the FRN market in two three-year transactions as part of a refinancing of a $1.5bn bank facility. One transaction was structured as a "volatility floater", which offered investors the chance to improve their yield.

● Standard & Poor's has raised its ratings on Citicorp and units and removed them from credit watch. S&P said the action reflected the progress the company has made in improving its financial strength. S&P raised the senior debt rating to A from A minus, and the subordinated debt rating to A minus from triple B plus.

Moody's has placed the long-term ratings of Italy's seventh-largest banking group, Banco di Napoli, under review for possible downgrading.

It said Italy's continuing recession made the bank vulnerable to further impairment of its asset quality. Banco di Napoli's long-term ratings are A2 for senior bank deposits and A3 for subordinated bank deposits and subordinated debt.

### NEW INTERNATIONAL BOND ISSUES

| Borrower | Amount m. | Coupon % | Price | Maturity | Fees % | Spread bp | Book runner |
|---|---|---|---|---|---|---|---|
| US DOLLARS | | | | | | | |
| New Zealand(a)‡ | 1bn | (b) | 99.78R | Apr.1999 | 0.15R | - | Morgan Stanley/ UBS |
| Petroleos Mexicanos‡ | 200 | (c) | 100.00R | Apr.1997 | 0.375R | - | Chase Investment Bank |
| Petroleos Mexicanos‡ | 200 | (d) | 100.00R | Apr.1997 | 0.375R | - | Swiss Bank Corp. |
| D-MARKS | | | | | | | |
| Ebara Corp.(e)ф | 160 | 1.00 | 100.00 | Mar.1998 | 2.25 | - | Dresdner Bank |
| YEN | | | | | | | |
| Japan Airlines Company★‡ | 10bn | (f) | 100.25 | Apr.1998 | 0.25 | - | IBJ International |

Final terms and non-callable unless stated. The yield spread (over relevant government bond) at launch is supplied by the lead manager. ★Unlisted. фWith equity warrants. ‡Floating rate note. R: fixed re-offer price; fees are shown at the re-offer level. a) Callable on any coupon date from Apr.96 at par. b) 3-mth Libor -⅛%. c) Series one: 3-mth Libor +2.05%. Interest accrues on days 3-mth Libor is no more than 50bp higher or 25bp lower than the Libor set for the period. d) Series two: 3-mth Libor +0.85%. e) Fixing: 24/3/94. f) 3-mth Libor +⅛%.

## WORLD BOND PRICES

### BENCHMARK GOVERNMENT BONDS

| | | Coupon | Red Date | Price | Day's change | Yield | Week ago | Month ago |
|---|---|---|---|---|---|---|---|---|
| Australia | | 9.500 | 08/04 | 113.3900 | −1.250 | 7.34 | 7.10 | 6.27 |
| Belgium | | 7.250 | 04/04 | 101.8500 | +0.450 | 6.99 | 7.00 | 6.64 |
| Canada * | | 6.500 | 06/04 | 93.3500 | - | 7.44 | 7.21 | 6.59 |
| Denmark | | 7.000 | 12/04 | 103.1000 | +0.630 | 6.58 | 6.62 | 6.21 |
| France | BTAN | 8.000 | 05/98 | 108.2700 | +0.410 | 5.70 | 5.70 | 5.37 |
| | OAT | 5.500 | 04/04 | 95.2000 | +0.730 | 6.15 | 6.26 | 5.91 |
| Germany | | 6.000 | 09/03 | 98.8500 | +0.360 | 6.16 | 6.12 | 5.80 |
| Italy | | 8.500 | 01/04 | 98.0900 | +1.650 | 9.32† | 9.13 | 8.55 |
| Japan | No 119 | 4.800 | 06/99 | 105.8770 | +0.230 | 3.48 | 3.70 | 3.07 |
| | No 157 | 4.500 | 06/03 | 102.8910 | -0.700 | 4.07 | 4.02 | 3.38 |
| Netherlands | | 5.750 | 01/04 | 97.3800 | +0.720 | 6.11 | 6.11 | 5.83 |
| Spain | | 10.500 | 10/03 | 111.5000 | +0.900 | 8.67 | 8.61 | 7.98 |
| UK Gilts | | 6.000 | 08/99 | 97-28 | +18/32 | 6.48 | 6.40 | 5.95 |
| | | 6.750 | 11/04 | 97-28 | +36/32 | 7.07 | 7.08 | 6.55 |
| | | 9.000 | 10/08 | 115-22 | +38/32 | 7.24 | 7.24 | 6.84 |
| US Treasury * | | 5.875 | 02/04 | 95-25 | +9/32 | 6.46 | 6.34 | 5.88 |
| | | 6.250 | 08/23 | 91-29 | +11/32 | 6.90 | 6.82 | 6.41 |
| ECU (French Govt) | | 6.000 | 04/04 | 95.8700 | +0.470 | 6.57 | 6.61 | 6.17 |

London closing, *New York mid-day. Yields: Local market standard.
† Gross annual yield (including withholding tax at 12.5 per cent payable by nonresidents)
Prices: US, UK in 32nds, others in decimal. Source: MMS International

### US INTEREST RATES

Lunchtime — Treasury Bills and Bond Yields

| | | | | | |
|---|---|---|---|---|---|
| | | One month | 3.25 | Two year | 4.85 |
| Prime rate | 6 | Two month | 3.56 | Three year | 5.35 |
| Broker loan rate | 5 | Three month | 3.65 | Five year | 5.88 |
| Fed.funds | 3⅛ | Six month | 3.96 | 10-year | 6.48 |
| Fed.funds at intervention | - | One year | 4.29 | 30-year | 6.88 |

### BOND FUTURES AND OPTIONS

#### France

■ NOTIONAL FRENCH BOND FUTURES (MATIF)

| | Open | Sett price | Change | High | Low | Est. vol. | Open int. |
|---|---|---|---|---|---|---|---|
| Mar | 125.60 | 126.24 | +0.68 | 126.28 | 125.48 | 219,944 | 96,326 |
| Jun | 125.10 | 125.78 | +0.68 | 125.80 | 125.02 | 57,190 | 114,811 |
| Sep | 124.38 | 125.06 | +0.68 | 124.84 | 124.38 | 200 | 12,590 |

■ LONG TERM FRENCH BOND OPTIONS (MATIF)

| Strike Price | Calls Apr | Calls Jun | Calls Sep | Puts Apr | Puts Jun | Puts Sep |
|---|---|---|---|---|---|---|
| 125 | - | 1.82 | - | 0.36 | 1.04 | - |
| 126 | 0.55 | 1.23 | - | 0.77 | 1.50 | - |
| 127 | 0.16 | 0.73 | - | - | 2.02 | - |
| 128 | 0.04 | 0.42 | 0.65 | - | 2.63 | - |
| 129 | - | 0.22 | - | - | - | - |

Est. vol. total, Calls 23,314 Puts 49,242. Previous day's open int., Calls 344,685 Puts 288,363.

#### Germany

■ NOTIONAL GERMAN BUND FUTURES (LIFFE)* DM250,000 100ths of 100%

| | Open | Sett price | Change | High | Low | Est. vol | Open int. |
|---|---|---|---|---|---|---|---|
| Jun | 96.82 | 97.88 | +0.99 | 97.98 | 96.76 | 192628 | 202930 |
| Sep | 97.01 | 97.66 | +0.98 | 97.60 | 97.01 | 157 | 5070 |

■ BUND FUTURES OPTIONS (LIFFE) DM250,000 points of 100%

| Strike Price | Calls Jun | Calls Sep | Puts Jun | Puts Sep |
|---|---|---|---|---|
| 9650 | 1.30 | 1.53 | 0.91 | 1.35 |
| 9700 | 1.05 | 1.30 | 1.16 | 1.62 |
| 9750 | 0.80 | 1.09 | 1.41 | 1.91 |

Est. vol. total, Calls 10344 Puts 15066. Previous day's open int., Calls 233446 Puts 214441

■ NOTIONAL MEDIUM TERM GERMAN GOVT. BOND (BOBL)(LIFFE)* DM250,000 100ths of 100%

| | Open | Sett price | Change | High | Low | Est. vol | Open int. |
|---|---|---|---|---|---|---|---|
| Jun | 100.92 | 101.47 | +0.49 | 101.44 | 100.92 | 1226 | 3346 |

#### Italy

■ NOTIONAL ITALIAN GOVT. BOND (BTP) FUTURES (LIFFE)* Lira 200m 100ths of 100%

| | Open | Sett price | Change | High | Low | Est. vol | Open int. |
|---|---|---|---|---|---|---|---|
| Jun | 110.60 | 112.40 | +1.70 | 112.98 | 110.45 | 58348 | 98549 |
| Sep | | 111.90 | +1.60 | | | 0 | 8 |

■ ITALIAN GOVT. BOND (BTP) FUTURES OPTIONS (LIFFE) Lira200m 100ths of 100%

| Strike Price | Calls Jun | Calls Sep | Puts Jun | Puts Sep |
|---|---|---|---|---|
| 11050 | 2.60 | 3.12 | 2.40 | 3.32 |
| 11100 | 2.35 | 2.88 | 2.65 | 3.58 |
| 11150 | 2.10 | 2.66 | 2.90 | 3.85 |

Est. vol. total, Calls 1266 Puts 1258. Previous day's open int., Calls 63988 Puts 51446

#### Spain

■ NOTIONAL SPANISH BOND FUTURES (MEFF)

| | Open | Sett price | Change | High | Low | Est. vol. | Open int. |
|---|---|---|---|---|---|---|---|
| Mar | - | 100.78 | - | - | - | 50 | 21,748 |
| Jun | 100.62 | 101.50 | +0.75 | 101.52 | 100.60 | 62,466 | 100,791 |

#### UK

■ NOTIONAL UK GILT FUTURES (LIFFE)* £50,000 32nds of 100%

| | Open | Sett price | Change | High | Low | Est. vol | Open int. |
|---|---|---|---|---|---|---|---|
| Mar | 111-23 | 113-00 | +1-12 | 112-31 | 111-23 | 1228 | 12236 |
| Jun | 110-20 | 112-01 | +1-11 | 112-09 | 110-19 | 76537 | 131434 |
| Sep | | 111-07 | +1-11 | | | 0 | 107 |

■ LONG GILT FUTURES OPTIONS (LIFFE) £50,000 64ths of 100%

| Strike Price | Calls Jun | Calls Sep | Puts Jun | Puts Sep |
|---|---|---|---|---|
| 110 | 2-05 | 2-25 | 1-25 | 2-33 |
| 111 | 1-36 | 1-60 | 1-56 | 3-04 |
| 112 | 1-09 | 1-36 | 2-29 | 3-44 |

Est. vol. total, Calls 918 Puts 3423. Previous day's open int., Calls 72773 Puts 53246

#### Ecu

■ ECU BOND FUTURES (MATIF)

| | Open | Sett price | Change | High | Low | Est. vol. | Open int. |
|---|---|---|---|---|---|---|---|
| Mar | 117.86 | 118.28 | +0.42 | 118.34 | 117.86 | 3,463 | 8,696 |
| Jun | 91.50 | 91.96 | +0.50 | 91.98 | 91.50 | 1,897 | 1,799 |

#### US

■ US TREASURY BOND FUTURES (CBT) $100,000 32nds of 100%

| | Open | Latest | Change | High | Low | Est. vol. | Open int. |
|---|---|---|---|---|---|---|---|
| Mar | 109-15 | 109-27 | +0-04 | 110-04 | 109-14 | 12,960 | 53,059 |
| Jun | 108-14 | 108-23 | +0-02 | 109-02 | 108-10 | 572,457 | 355,952 |
| Sep | 107-16 | 107-27 | +0-02 | 108-04 | 107-15 | 4,955 | 39,861 |

#### Japan

■ NOTIONAL LONG TERM JAPANESE GOVT. BOND FUTURES (LIFFE) Y100m 100ths of 100%

| | Open | Close | Change | High | Low | Est. vol | Open int. |
|---|---|---|---|---|---|---|---|
| Jun | 110.17 | | | 110.25 | 110.06 | 2077 | 0 |

* LIFFE contracts traded on APT. All Open interest figs. are for previous day.

### FT-ACTUARIES FIXED INTEREST INDICES

| Price Indices UK Gilts | Tue Mar 15 | Day's change % | Mon Mar 14 | Accrued interest | xd adj. ytd | | Low coupon yield Mar 15 | Mar 14 | Yr. ago | Medium coupon yield Mar 15 | Mar 14 | Yr. ago | High coupon yield Mar 15 | Mar 14 | Yr. ago |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 Up to 5 years (23) | 127.14 | +0.12 | 126.99 | 2.08 | 2.07 | 5 yrs | 6.49 | 6.59 | 6.55 | 6.71 | 6.79 | 6.85 | 6.81 | 6.90 | 7.03 |
| 2 5-15 years (24) | 153.49 | +0.85 | 152.20 | 1.63 | 3.50 | 15 yrs | 7.16 | 7.29 | 7.69 | 7.25 | 7.38 | 8.20 | 7.52 | 7.64 | 8.44 |
| 3 Over 15 years (8) | 174.47 | +1.11 | 172.56 | 0.99 | 3.53 | 20 yrs | 7.30 | 7.40 | 7.96 | 7.27 | 7.39 | 8.38 | 7.53 | 7.65 | 8.52 |
| 4 Irredeemables (6) | 202.17 | +0.32 | 201.54 | 2.75 | 1.47 | Irred.† | 7.48 | 7.50 | 8.38 | | | | | | |
| 5 All stocks (61) | 149.38 | +0.67 | 148.39 | 1.72 | 3.00 | | | | | | | | | | |

| Index-linked | Tue Mar 15 | Day's change % | Mon Mar 14 | Accrued interest | xd adj. ytd | | Inflation 5% Mar 15 | Mar 14 | Yr. ago | Inflation 10% Mar 15 | Mar 14 | Yr. ago |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 Up to 5 years (2) | 188.23 | +0.12 | 188.00 | 0.85 | 1.41 | Up to 5 yrs | 2.59 | 2.62 | 2.10 | 1.74 | 1.77 | 1.30 |
| 7 Over 5 years (11) | 183.95 | +0.94 | 182.37 | 0.52 | 1.29 | Over 5 yrs | 3.22 | 3.29 | 3.49 | 3.05 | 3.12 | 3.32 |
| 8 All stocks (13) | 183.49 | +0.85 | 182.05 | 0.55 | 1.29 | | | | | | | |

| Debentures and Loans | Tue Mar 15 | Day's change % | Mon Mar 14 | Accrued interest | xd adj. ytd | 5 year yield Mar 15 | Mar 14 | Yr. ago | 15 year yield Mar 15 | Mar 14 | Yr. ago | 25 year yield Mar 15 | Mar 14 | Yr. ago |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9 Debs & Loans (73) | 145.90 | +0.58 | 145.05 | 2.14 | 2.68 | 8.15 | 8.26 | 8.41 | 8.38 | 8.45 | 9.18 | 8.46 | 8.52 | 9.43 |

Average gross redemption yields are shown above. Coupon Bands: Low: 0%-7¾%; Medium: 8%-10¾%; High: 11% and over. † Flat yield. ytd Year to date.

### FT FIXED INTEREST INDICES

| | Mar 15 | Mar 14 | Mar 11 | Mar 10 | Mar 9 | Yr ago | High* | Low* |
|---|---|---|---|---|---|---|---|---|
| Govt. Secs. (UK) | 100.50 | 100.09 | 100.01 | 101.07 | 100.97 | 97.23 | 107.60 | 98.26 |
| Fixed Interest | 121.20 | 121.68 | 122.37 | 122.82 | 123.17 | 113.68 | 133.87 | 108.67 |

* for 1993/94. Government Securities high since compilation: 127.40 (9/1/35), low 49.18 (3/1/75). Fixed Interest high since compilation: 133.87 (21/1/94), low 50.53 (3/1/75). Base 100: Government Securities 15/10/26 and Fixed Interest 1928. SE activity indices rebased 1974

### GILT EDGED ACTIVITY INDICES

| | Mar 14 | Mar 11 | Mar 10 | Mar 9 | Mar 8 |
|---|---|---|---|---|---|
| Gilt Edged bargains | 107.2 | 88.1 | 87.0 | 90.0 | 97.9 |
| 5-day average | 94.0 | 98.2 | 103.9 | 113.8 | 123.6 |

## FT/ISMA INTERNATIONAL BOND SERVICE

Listed are the latest international bonds for which there is an adequate secondary market. Latest prices at 6:55 pm on March 15

| | Issued | Bid | Offer | Chg. | Yield |
|---|---|---|---|---|---|
| U.S. DOLLAR STRAIGHTS | | | | | |
| Abbey Natl Treasury 6½ 03 | 1000 | 95¾ | 96 | | 7.14 |
| AlbertaProvince 9⅜ 95 | 600 | 106⅞ | 105½ | −⅛ | 5.28 |
| Austria 8½ 00 | 400 | 109⅜ | 109¾ | | 6.52 |
| Bank of Tokyo 8⅛ 96 | 100 | 105⅛ | 105⅜ | +⅛ | 5.65 |
| Belgium 9⅝ 98 | 250 | 112½ | 112⅞ | | 6.22 |
| United Kingdom 7⅛ 97 | 5500 | 104⅝ | 104⅞ | +⅛ | 5.66 |
| Volkswagen Intl Fin 7 03 | 1000 | 101⅛ | 101⅝ | +1 | 6.83 |
| World Bank 0 15 | 2000 | 27⅜ | 27⅝ | +⅜ | 6.13 |
| World Bank 5⅜ 03 | 3000 | 97⅜ | 97½ | +⅜ | 6.24 |
| World Bank 8¾ 00 | 1250 | 113⅝ | 114⅛ | −⅛ | 6.01 |
| Alliance Leics 11⅞ 97 £ | 100 | 112⅞ | 113¼ | | 6.69 |
| British Gas 12¾ 95 £ | 300 | 108¼ | 108⅝ | −¼ | 6.50 |
| British Land 8⅞ 23 £ | 150 | 96⅞ | 97⅜ | +½ | 9.39 |
| EIB 10 97 £ | 637 | 109 | 109⅜ | | 6.47 |
| Halifax 10⅜ 97 £ | 100 | 109½ | 110¼ | +⅛ | 6.64 |
| Hanson 10⅜ 97 £ | 500 | 110⅛ | 110⅝ | +⅛ | 7.06 |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |

## UK GILTS PRICES

| Notes | Yield Int | Yield Red | Price £ | + or − | 1993/94 High | 1993/94 Low |
|---|---|---|---|---|---|---|
| Shorts" (Lives up to Five Years) | | | | | | |
| Exch 13¼pc 1994 | 13.37 | 4.94 | 101 | −⅛ | 109⅞ | 101 |
| Treas. 10pc Ln. 1994‡‡ | 9.88 | 4.91 | 101⅛ | — | 105⅞ | 101⅛ |
| Exch 12½pc 1994 | 12.10 | 4.89 | 103⅛ | −⅛ | 110⅜ | 103⅛ |
| Treas 9pc 1994‡‡ | 8.76 | 4.93 | 102⅞ | −⅛ | 105⅞ | 102⅞ |
| 12pc 1995 | 11.33 | 4.91 | 105⅞ | −⅛ | 111⅞ | 105⅞ |
| Treas 11¾pc 2001-4 | 9.34 | 7.19 | 123⅞xd | +1⅞ | 129⅞ | 116⅞ |
| Funding 3½pc '99-4 | 4.42 | 6.24 | 79¼ | +1⅛ | 86⅞ | 67⅞ |
| Conversion 9½pc 2004 | 8.13 | 7.17 | 116⅞ | +1⅞ | 125⅞ | 105⅞ |
| Treas 6¾pc 2004‡‡ | 6.91 | 7.02 | 97¾ | +1⅛ | 105⅞ | 95⅞ |
| 6¾pc 2004 A | 6.91 | 7.03 | 97¾ | +1⅛ | 104⅞ | 96⅞ |
| Conv 9½ pc 2005 | 8.10 | 7.18 | 117⅞xd | +1⅞ | 125⅞ | 105⅞ |
| Index-Linked (b) | | | | | | |
| Treas. 2pc '94 (102.9) | - | - | 137⅞ | — | 137⅞ | 131⅞ |
| 2pc '96 (67.9) | 1.50 | 2.47 | 200⅞xd | +⅞ | 204½ | 194⅞ |
| 4⅝pc '98‡‡ (135.6) | 1.73 | 2.39 | 110⅛ | +⅞ | 113⅞ | 105⅞ |
| 2½pc '01 (78.3) | 2.40 | 2.76 | 172⅛xd | +1⅛ | 176⅞ | 159 |
| 2½pc '03 (78.8) | 2.64 | 2.94 | 168⅞ | +1⅛ | 179⅞ | 155 |
| 4⅝pc '04‡‡ (135.6) | 2.67 | 2.95 | 114⅞xd | +⅞ | 118½ | 105½ |
| [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |

# Shift in focus leaves Williams down at £153m

By Peggy Hollinger

A shift in focus hit Williams Holdings, the conglomerate which yesterday announced a £4.2m drop in pre-tax profits to £153.2m for the year to December 31.

Profits were depressed by a £17.1m loss on the disposal of the bulk of Williams' engineering division to management for £40m. The sale is part of the group's strategy to focus on three sectors – building products, security and fire protection. Excluding exceptional items, pre-tax profits rose by 13 per cent to £170.3m.

Cashflow from operating activities, for which Williams has been criticised in the past, improved by 15 per cent to £227.9m. This represented 119 per cent of operating profits.

Mr Nigel Rudd, chief executive, was bullish about the outlook for the group's main operating markets, saying there were definite signs of recovery in both the UK and US. Some 80 per cent of the group's sales are from those two markets. In Britain however, "government policy and consumer caution will limit the pace and degree of demand improvement," he said.

Williams was seeking growth in spite of such difficulties, Mr Rudd said, through expanding its share of even sluggish markets by tapping new outlets.

The group's sales were 17 per cent higher at £1.21bn, including a £66.9m contribution from acquisitions. Continuing businesses were 11 per cent up at £1.1bn.

Williams pursued acquisitions aggressively during the year, spending £157.6m on seven businesses. These contributed £6.3m to operating profits, which improved overall by 13 per cent to £191.6m.

North American building products showed the strongest advance, as a result of a cost reductions. Operating profits rose 34 per cent to £39.6m.

Fire protection improved by 19 per cent to £47.6m, while the European building products operations contributed £69.1m against £59.3m.

The security division improved from £22.5m to £25.2m.

In line with its stated policy of seeking to improve the dividend cover to about two times, Williams proposed a final payment of 7.75p. This leaves the total dividend just 2 per cent higher at 12.75p. Earnings fell from 18.6p to 15.7p.

See Lex

# Medeva chief goes as rise of 28% to £46m is shown

By David Wighton

Mr Ian Gowrie-Smith, the Australian entrepreneur who founded Medeva, the acquisitive pharmaceuticals group, is resigning his executive position nine months after a profit warning which halved the share price.

Mr Gowrie-Smith, managing director, and his long-time business partner Mr David Lees, who is resigning as finance director, will continue to provide the group with "acquisition services" on a consultancy basis. Mr Gowrie-Smith will remain a non-executive director.

The resignations came as Medeva announced a 28 per cent increase in pre-tax profits to £46.1m for 1993.

In July the company warned that profits would be about £10m lower than analysts' expectations of £53m-£57m largely due to problems at IMS and MD Pharmaceuticals, US subsidiaries, which would cost almost £7m.

Sales jumped 39 per cent to £200.4m with organic growth excluding exchange rate movements of 20 per cent. Earnings per share slipped 4 per cent to 11.8p due partly to a higher tax charge. The final is 1.8p (1.5p) giving 2.7p (2.25p) total.

Mr Bernard Taylor, who was brought in as chairman in 1990, insisted that the resignations were not linked to the problems the group encountered last year. He denied there had been any pressure on them to go.

Although it is an open secret that Mr Taylor found it hard to work with Mr Gowrie-Smith sources close to the company insisted that the resignations were voluntary.

"Bernard couldn't force them to go. In the end they went because they got bored."

The shares added 7p to 155p yesterday.

Both will receive £30,000 in compensation for loss of office and have been granted three-year consultancy agreements. These provide for initial payments of £286,000 and £230,000 and payments over the next three years totalling a minimum of £700,000 and £400,000 respectively. Mr Gowrie-Smith received a salary of about £310,000 last year, down about 25 per cent.

Mr Taylor revealed that the group pulled out of a potential deal after the shares slumped from 216p to 116p on the profit warning but said it still needed to make acquisitions. Mr Gowrie-Smith said it could afford to make a £100m purchase without issuing more shares.

**● COMMENT**

The rather modest rise in Medeva's share price yesterday may reflect the fact that Mr Gowrie-Smith's move was seen as only a matter of time. There were also a few negatives with the figures, which were boosted by booming flu vaccine sales, including a year delay in the important hepatitis B vaccine programme. On forecasts for the current year of about £54m the shares are now on a multiple of about 12.5. There is plenty of scope for further recovery.

# Owen & Robinson price rises on reports of stake acquisition move

By Andrew Bolger

Shares in Owen & Robinson, the gold jewellery and sports footwear retailer, rose 8p to 34p yesterday after a report that a stake in the group might be taken by Mr Philip Green, the controversial former chairman and chief executive of Amber Day, the discount retailer.

Mr Green said last night: "At this moment, I have bought no shares." It is understood, however, that Mr Green has had talks with Mr Maurice Dweck, a former chairman of Owen & Robinson, who still owns 15.8 per cent of its shares.

Mr Green declined to comment on any possible talks, but said: "I always look at interesting situations. If it's the right deal at the right time, I might look at it."

Mr Steve Foot, Owen & Robinson's finance director, said of Mr Green: "If he's buying shares, he hasn't done so yet."

Mr Green stepped down in September, 1992, from Amber Day, which has since been renamed the WEW Group. He left with a £1.13m golden handshake after a deluge of adverse press coverage was followed by results well below analysts' expectations. Mr Green also received £7.6m from selling his stake in the group.



# Flotation values Maid at £89.1m

By Paul Taylor

Shares in Maid, the on-line business information supplier, were priced at 110p yesterday valuing the group at £89.1m – well below market expectations fuelled by the company and its financial advisers.

Some 11.5m shares in the nine-year-old group have been placed firm with institutional investors by Hoare Govett, stockbroker to the issue, on behalf of the company.

The new shares represent a little more than 14 per cent of the shares in issue following the placing.

Earlier the company had been confidently predicting that the issue, underwritten by Hill Samuel, would place a minimum value of £100m on the group and provide it with about £16m in net new funds. A placing price of up to 150p a share had been mooted.

However the flotation has been dogged with controversy, with some analysts and fund managers expressing concern and surprise at Maid's proposed stock market valuation and lack of established track record.

As a result the company scaled down its expectations for the flotation price and has abandoned plans to spend £4m on a building to consolidate the group's UK operations.

In addition, a number of existing BES investors in the company who had been expected to sell shares in the placing, have decided to wait.

Nevertheless, both the company and its advisers insisted that the placing had been a success and defended the pricing while blaming competitors for "the background noise" surrounding the issue.

Mr Stephen Aulsebrook of Hill Samuel, described the 110p price as "very attractive", and said the placing had been well received by most institutional investors.

"We set out to raise enough money for the company to move forward and we have done that," he said, adding, "it is a hell of an achievement for a company which, as some people have pointed out, made only £600,000 in profits last year."

Mr Daniel Wagner, Maid's 30-year-old founder and chief executive, said he was "thrilled to bits" with the placing while acknowledging that market conditions had resulted in the issue having to be priced "more competitively".

He said the new funds, while somewhat less than anticipated, would enable Maid to continue to develop its product portfolio, including a planned version of Maid for Windows version of it's software.

He dismissed the company's critics who have questioned various aspects of its operations, including its dependence on primary business information providers.

"This is a brilliant business and we are going to prove it in the market," Mr Wagner said.

# Saatchi back to black with £19m

Saatchi & Saatchi, one of the world's largest advertising groups, yesterday reported pre-tax profits of £19.2m for the year ended December 31 1993, compared with a loss of £595.1m in 1992, writes Diane Summers.

The figure was in line with City expectations, which were revised downwards by about £6m in December, after a profits warning from the group. The shares closed down 1p at 141p.

Saatchi hailed the results as a return to profitability for the first time since 1988. However, the 1992 figure included a £600m write-off of goodwill associated with US acquisitions made in the 1980s.

Revenue from continuing operations rose 10 per cent, from £731m to £806m, but the rise was accounted for by currency movements, said Saatchi. Excluding these, revenue for 1993 was flat.

Similarly, operating costs appeared to rise from £713.8m to £776.6m. But once constant exchange rates were applied and severance, property credits and disposals excluded, costs dropped by 1 per cent.

The group warned that revenues in 1994 will be lower than for 1993. "The revenue outlook for 1994 is difficult. We have lost two big clients, in neither case due to the quality of our work, and clients remain cautious about their planned level of expenditure, particularly in Europe."

Trading profits increased by 8 per cent to £36.8m (£34.2m). Severance costs of £19.1m were charged and £7.3m surplus property provisions were credited. Excluding currency movements and exceptionals trading profits increased by 1 per cent.

Profit margins, excluding exceptional items, increased from 6.1 per cent to 6.3 per cent in 1993. Mr Charlie Scott, group chief executive, admitted that the group was not on course to meet his target of 10 per cent margins by 1995. Meeting the target was dependent on revenues increasing in line with inflation, and that had not happened during 1993, he said.

Profit attributable to shareholders totalled £7.3m (loss of £613.7m), with earnings per share of 3.7p (losses of 362.8p). No dividend will be paid.

After taking into account a £73m rights issue in June and currency movements, average net debt during December 1993 was £112m, a reduction of £82m. Analysts forecast pre-tax profits of about £30m for 1994, with earnings per share of 7p.

# Of relationships and bottom lines

## Diane Summers on the personal conflicts that split the Saatchi board

Mr Charlie Scott, group chief executive of Saatchi & Saatchi, yesterday described the past 18 months as the worst in his life. However, he considers his struggle to reduce debts, restructure operations and install effective management is now largely over.

As his statement accompanying the group's results yesterday said: "All the businesses remaining in the group are now profitable, and as trading conditions in our core markets start to improve during 1994, I am confident Saatchi will demonstrate the performance that our shareholders have the right to expect."

Whether or not his confidence is justified will depend, to a large extent, on two factors. First, the Saatchi board will need to pull together and overcome the embarrassingly public conflict between Mr Maurice Saatchi, its chairman, and Mr Scott.

Second, the revamped management, particularly in the US, will need to start showing new business gains and evidence that it can reverse the decline in market share which has been eroding revenues.

The relationship between Mr Scott and Mr Saatchi appeared to decline sharply from the point when, in December, it was announced that Maurice's brother, Charles, would step down as a director.

It was also decided that Saatchi's offices in Berkeley Square, in the West End of London, would be vacated.

There followed rumours that the brothers were planning a buy-out and that Maurice wanted to take over more of the running of the group. Now, a compensation committee, headed by Sir Peter Walters, will examine Maurice's five-year rolling contract, described by Mr Scott as "not within the spirit of the Cadbury guidelines".

Maurice Saatchi (left) and Charlie Scott: there is concern that their public conflict could affect relationships with clients

Says one Maurice supporter: "He admits he has withdrawn a lot over the past year, he had let things drift. He's left executive functions with the board and he now believes that was a mistake."

Maurice is said to feel that the "beancounters" have failed to deliver their promises on the financial side. Mr Scott's supporters, in turn, say that Maurice has not delivered on his part of the bargain – bringing in new clients.

To blame Mr Scott for what continues to be a depressing picture is unjust, according to the heads of other agencies.

Said the chief executive of one large group yesterday: "One has to remember it was Maurice Saatchi who made the bid for the Midland Bank. He was also one of the architects of the huge, sprawling, shambling empire. To begin to blame Charlie Scott, who seems to have done a fair job of stabilising the business, seems to me to be desperately unfair. Indeed, there wouldn't be a business without Charlie Scott."

The head of another large agency pointed to the "nervousness and confusion" resulting from the conflict, which is being felt by staff at the Saatchi & Saatchi agency network, which shares the holding company's name. There is concern that some of the bad press will have an effect on relationships with clients.

And it is the relationship with clients – particularly potential clients – that will have most influence on the bottom line. According to Mr Scott, the group has lost about 1.4 percentage points of market share over the past three years – worth about £50m a year in revenue – from the 20 per cent of the global market it holds.

The problem is largely in the US, where big contracts to have been lost recently include the Chrysler and Helene Curtis accounts, worth £30m in revenue this year.

Fixed costs are high. The staff of about 11,000 account for more than 60 per cent of revenue. By growing revenue, Mr Scott is aiming to get this down to the 55 per cent or so enjoyed by competitors Interpublic and Omnicom – he calculates that at least half of any extra revenue will flow straight to the bottom line.

Mr Scott calculates that over the past four years, and in particular over the past two, about 70 per cent of the managers he describes as the "key drivers" towards these ends have been replaced or transferred.

"For the first time since I joined the company, we now have quality CEOs in all our operating companies. These people have been selected for their ability to grow the business," he said.

# Restructuring aids Emess recovery

By Simon Davies

Emess, the UK's largest lighting company, yesterday announced the reversal of two years of losses with pre-tax profits of £4m for 1993, against a £10.6m deficit in 1992.

The result was mainly attributable to improved performances from the US and German subsidiaries, and the impact of an aggressive restructuring programme.

During 1993, group staffing levels were reduced by 20 per cent to 2,000, as businesses were streamlined and unprofitable product lines cut. Sales per employee rose from £54,000 to £64,000 in the year.

Turnover was £131.2m, against £130.3m from continuing operations in 1992.

Mr Michael Meyer, chairman, said: "I am more encouraged by prospects for our businesses in 1994 than at any time during the past four years". He added that trading in the first two months was ahead of budget."

Operating profit was £6m (£1m loss). The UK operations contributed £5.9m (£0.1m) and they have seen a strong start to the current year.

Brilliant, the German business, had lost £2m in 1992, but contributed a marginal profit last year, after staff reorganisation. Also its US subsidiary returned to the black during 1993. Net debt at the year-end was up from £20m to £26m, because of the repurchase of £11m of preference shares. However, average debt for the year was lower, and interest payments fell from £3.6m to £2m.

The company has recommended an unchanged final dividend of 0.1p, despite the fact that net earnings of £2.4m were not sufficient to cover preference dividends of £3.9m.

Fully diluted earnings per share amounted to 1.5p (7.2p losses). The shares closed 2½p higher yesterday at 32p.

# B&J puts pressure on bankers

By Peggy Hollinger

Brown & Jackson, the discount retailer which has raised £39m from shareholders since 1992, yesterday sought to put pressure on its bankers by warning it could not continue trading unless working capital facilities of £14m were agreed soon.

The company's shares fell by 3¾ to 2¾p as it revealed substantially larger than expected losses for 1993 and warned of the difficulties in negotiations with its bankers.

If working capital facilities for the next 12 months are not secured soon, the £6m sale and leaseback transaction which was due to be completed yesterday cannot go ahead.

Analysts held out little hope of a resolution, at least through the banks, and said that the group had been expected to make further losses this year. "B&J has just passed its cash peak," said Mr William Cullum, analyst with brokers Panmure Gordon, "so the banks will get out what they put in."

The announcement was also a high risk gamble, he suggested. "If you were a supplier would you now want to supply B&J? This sort of public disagreement could be self-fulfilling," Mr Cullum said.

Mr Ian Gray, the chief executive appointed following a rescue rights issue in 1992, said the group had "adequate trading facilities today". He was confident that the company would be able to trade until a solution was found. "We have a number of options," he said.

One of the options was investment by a foreign discount retailer, he said. The group was in discussions with both the retailer and the banks.

Midland Bank is believed to have decided not to provide further facilities in light of the group's most recent results and its past trading record.

Brown & Jackson unveiled full year losses of £12.7m (£6.6m) on turnover of £170m (£167m), against average expectations of an £8m deficit.

# BA separates out engineering side

By Paul Betts, Aerospace Correspondent

British Airways is setting up its engineering activities as a separate profit centre next month in an effort to reduce the airline's overall aircraft maintenance and engineering costs, as well as expand engineering services to other carriers.

The engineering and aircraft maintenance activities employ about 10,000 people out of BA's total 50,000 strong workforce and include facilities at London's Heathrow airport and in Wales, where BA overhauls Boeing 747 jumbo airliners and recently opened an aircraft avionics repair and maintenance centre.

The engineering activities headed by Mr Alistair Cumming are also expected to be strengthened by imminent management changes to boost the company's engineering management team.

BA's engineering operations have seen significant growth over the last three years. The company, which outlined yesterday its plans to its unions to transform the engineering business from a cost centre into a profit centre, sees strong potential for further growth in aircraft maintenance and engineering services.

Already about 15 per cent of BA's overall engineering activities involves work for other carriers and the airline hopes to develop this third party business through its latest reorganisation.

## NEWS DIGEST

### Castle Comms rises 22%

Castle Communications, which is involved in marketing audio and video film rights, achieved a 22 per cent improvement in pre-tax profits from £927,000 to £1.13m, for the six months to December 1993.

Mr Terry Shand, chairman, said the company had been helped by substantial increases in licensing income and video product sales, and good growth in the German subsidiary.

Turnover advanced by 10.5 per cent to £18.8m (£17m).

After taking into account losses at Castle Australia, since sold, operating profits fell to £1.39m (£1.47m).

The interim dividend is lifted to 4.5p (4p), payable from earnings of 10.2p (8.2p) per share.

The company's shares trade on the USM.

### Heiton pays I£8.1m for F&T Buckley

Heiton Holdings has bought F&T Buckley (Holdings), a builders merchant based in the Irish Republic, from Harrisons & Crosfield for I£8.1m (£7.79m) in cash.

Proceeds of the sale will be used by H&C to reduce borrowings. The company will also assume borrowings by Buckleys of approximately I£2.5m.

Heiton is also to raise I£9.2m by way of a 4-for-7 rights issue of 16.4m new ordinary shares of 25p at 56p apiece.

The issue has been fully underwritten by AIB Capital Markets.

### Hampden nears breakeven

Hampden Group, the USM-traded homecare and DIY retailer, managed to approach breakeven in the second half of the year to January 1, leaving pre-tax losses at £220,000 against profits of £482,000. Interim losses had been £198,000.

Turnover edged ahead to £30m (£29.8m). Losses per share came out at 1.47p (2.08p earnings). The dividend is being passed. Last time there was a total of 1p.

### Ashanti

Ashanti, one of the world's biggest gold mines, will have a market capitalisation of up to $1.67bn (£1.14bn) after its flotation, not £1.67bn as printed in yesterday's Financial Times.

## DIVIDENDS ANNOUNCED

| | Current payment | Date of payment | Corres - ponding dividend | Total for year | Total last year |
|---|---|---|---|---|---|
| Brown & Jackson ......fin | nil | - | 0.1 | nil | 0.1 |
| Castle Communs §....int | 4.5† | July 5 | 4 | - | 8.5 |
| Crockfords ..............fin | 2.5† | Apr 29 | - | 2.5 | - |
| Delta .......................fin | 10.3 | June 1 | 9.8 | 14.5 | 14 |
| Emess .......................fin | 0.1 | May 23 | 0.1 | 0.1 | 0.1 |
| Evans Halshaw ........fin | 9.2† | May 13 | 7.65 | 13 | 11.25 |
| Everest Foods ..........int | 1.2 | - | 1.2 | - | 3.7 |
| Graseby ....................fin | 3.3† | May 17 | 7.6 | 6.6 | 10.9 |
| GT Chile Growth .......fin | 60‡ | Mar 31 | nil | 120 | 25 |
| Hall Engineering.........fin | 3.02 | Apr 22 | 5.34 | 9.5 | 8.64 |
| Hampden § ................fin | nil | - | 0.8 | nil | 1 |
| Heywood Williams.....fin | 8.5† | - | 8 | 13 | 12.5 |
| Lionheart ..................fin | 0.2 | July 1 | nil | 0.3 | 0.2 |
| Medeva ....................fin | 1.8† | May 23 | 1.5 | 2.7 | 2.25 |
| Paterson Zoch ..........int | 2.45 | May 6 | 2.35 | - | 12.6 |
| Scholes ....................int | 1.7 | May 9 | 1.6 | - | 5 |
| Wassall ....................fin | 2.4† | May 20 | 1.7 | 3.4 | 2.5 |
| Williams Hldgs ..........fin | 7.75† | May 26 | 7.5 | 12.75 | 12.5 |
| Wimpey (George) ......fin | 3.25† | May 9 | 3.25 | 5.25 | 5.25 |
| Wolseley ..................int | 4.72 | July 29 | 3.55 | - | 13.3 |

Dividends shown pence per share net except where otherwise stated. †On increased capital. §USM stock. ‡Cents throughout.

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COMPANY NEWS: UK

# Wimpey bounces back into black with £25.5m

By Andrew Taylor, Construction Correspondent

Wimpey, following its biggest ever pre-tax loss of £111.6m in 1992, bounced back into the black last year with pre-tax profits of £25.5m.

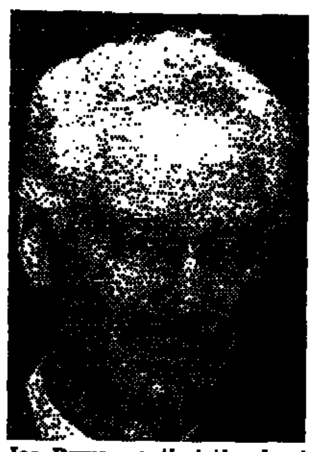
Trading profits rose 85 per cent from £22.1m to £40.9m, boosted by a strong recovery in UK housing, with completed sales up by a quarter to 6,936.

Group turnover fell from £1.64bn to £1.59bn. The final dividend is again 3.25p, maintaining the total for year at 5.25p, just covered by earnings of 6.81p a share.

Housing, in spite of only breaking even overseas, moved from a £33.3m loss in 1992 to a £25.4m profit last year. Operating margins in the UK, having fallen in every year since 1989, more than doubled from 3 per cent to 6.5 per cent last year. This compared with a peak of 19 per cent four years ago.

Mr Joe Dwyer, chief executive, was optimistic about further rises in UK house sales and margins, with prices already starting to edge off the bottom in south-east England.

He said the company had seen no evidence that tax rises due to take effect next month were dampening demand from prospective purchasers.



Joe Dwyer: optimistic about further rises in UK house sales

Wimpey would be selling its house building businesses in France, Spain, Australia and southern California to concentrate on its UK and other US housing operations. Also still up for sale was £135m of commercial property investments.

The group has raised more than £300m from disposals, transforming its balance sheet and reducing gearing from 30 per cent to 5 per cent, the lowest level for 20 years.

Net debt of £28m at end-December, however, is expected to rise this year as the group increases land purchases, while UK house sales are expected to top 7,500 during the period. Gearing was likely to reach 30 per cent, implying net debt of about £160m.

Construction profits halved from £4.5m to £2.2m on turnover down from £683m to £659m, reflecting the difficult conditions in the UK. The figures however excluded £8m of interest on advanced payments on construction projects.

Minerals, helped by a £7.9m windfall planning gain, rose to £13.1m (£1.6m).

● **COMMENT**

Wimpey's results were bang in line with expectations. Even so its share price fell 8p to 210p following the figures. The market having given the company credit for rebuilding its balance sheet is concerned about where it goes next. There is concern that its emphasis on first time buyers will mean that margin recovery may be restricted. The UK aggregates business also compares unfavourably with its main rival, Tarmac. The company talks bravely of acquisitions and organic expansion, but now needs to deliver. Profits of £45m put the group on a prospective p/e of more than 20. The shares, after a good run, are now suffering.

# Paterson Zochonis rises 15%

Paterson Zochonis, the detergents manufacturer, was bullish yesterday about prospects as it announced a 15 per cent increase in interim pre-tax profits to £13.6m.

The increase was achieved on sales 3 per cent ahead to £126m for the six months to November 30.

The company said it was confident that, barring any unexpected currency movements, it would increase profits from last time's £25.3m in the year to May 31. The interim dividend was increased by 4 per cent to 2.45p. Earnings were 18 per cent higher at 17.69p.

During the first half, profits were helped by lower interest charges, an increased contribution from associates and an improved operating return.

Interest charges fell by 18 per cent to £2.74m, while the contribution from associates rose by £600,000 to £1.83m.

The company said trading in parts of Africa was becoming increasingly difficult, particularly in Nigeria, the Congo and Cameroun.

In Europe, Paterson increased sales of Cussons soaps and toiletries in a competitive market. The Polish detergents manufacturer returned an encouraging performance, the company said.

# Rights bolsters Wassall advance

By David Wighton

Wassall, the conglomerate which lost the bid battle for Evode last year, saw pre-tax profits jump from £17.8m to £27.6m in 1993 on sales up 11 per cent to £277.8m.

Profits were boosted by the £103m rights issue launched to fund the thwarted Evode bid. But the issue diluted earnings per share which rose 23 per cent to 11.7p.

Mr Chris Miller, chief executive, said that earnings per share would have been 11 per cent higher but for the rights issue, though they were lifted 8 per cent by exchange rate movements.

The loss of Evode, where Wassall was outbid by Laporte, has been followed by further disappointments, including abortive talks with Fenner. "We have got quite close to a number of things but most failed for price-related reasons," said Mr Miller.

"We are as confident as you can be that there will be an acceptable deal in the not too distant future," he added.

Although Wassall is still viewed as an acquisition-driven group, Mr Miller pointed to the strong organic growth shown by the 32 per cent increase in operating profit to £27.2m. "That suggests there is something we are doing that is not straight asset-stripping."

He said the improvement was "particularly satisfactory" given that most of its markets outside the US experienced little or no recovery last year.

Even in the US, its DIY products supplier DAP has had to work hard to increase sales and most of the advance came from higher margins. Its operating profits rose from £10.5m to £13.7m, on sales £20.7m higher at £146.7m.

Metal Closures, the bottle top manufacturer which was the group's first large acquisition, continued to make good progress. The South African arm, which contributes nearly 30 per cent of group profits, had an "excellent" year in difficult conditions and the division's profits rose to £12.2m (£9.3m) on sales of £82.1m (£76.6m).

A final dividend of 2.4p gives a total up 36 per cent at 3.4p (2.5p).

● **COMMENT**

It may be that the ex-Hanson men who run Wassall are just too choosy when it comes to buying companies. But then they can afford to be. Their past acquisitions are still generating the sort of improvements that most "growth" companies would kill for. Perhaps most remarkable of all is the progress of Metal Closures' South African business, where profits have risen from £1.5m to £8m since Wassall bought the company in 1990. This exposure may unsettle the nervous, though Mr Miller points out things would have to get pretty bad to hit sales of bottle tops. The real worry is Wassall's inability to find an earnings enhancing acquisition despite the low returns on its cash pile. Without some action before long, the shares' deservedly high rating will be hard to sustain. On current year forecasts of about £31.5m the shares at 295p, up 10p, are on a multiple of over 22.

# Tiphook's shares rise on container sale completion

Shares in Tiphook rose by 5p to 55p yesterday after the debt-laden transport leasing group confirmed the completion of the sale of its container business to Transamerica, the US financial services group, writes Andrew Bolger.

Proceeds of £673m were received yesterday by Tiphook, which could receive a further £49m from the deal.

The final consideration depends on changes in the net assets of the container operations between September 30 and yesterday, and is subject to a completion audit.

Tiphook, which had debts of more than £1bn, had warned that its survival depended on the successful disposal.

Completion of the sale was conditional on consents by a majority of the group's US bondholders.

# GKN 90.9% acceptance in loan stock rights issue

GKN yesterday announced it had received acceptances in respect of almost 50m units of non-interest bearing convertible loan stock, representing about 90.9 per cent of the units offered in its recent rights issue.

The units are priced at 480p apiece and are payable in two equal instalments.

Subscribers have been procured at a premium for the 4.83m units for which valid acceptances were not received.

The second instalment of 240p per stock unit remains conditional on the offers for Westland becoming wholly unconditional and GKN achieving 75 per cent ownership of Westland.

SG Warburg is acting for GKN in connection with the offers and the rights issue.

# Holders bid to oust Andrews Sykes board

By Tim Burt

Rebel shareholders at Andrews Sykes, the lossmaking industrial services group, yesterday launched a bid to oust the board in a re-run of a similar coup attempt 18 months ago.

Dissidents led by Mr Jacques Murray, who holds 29.2 per cent of the Midlands company, have called an extraordinary meeting at which they hope to win management control.

A spokesman for Mr Murray, chairman of Nu-Swift, the fire protection group, said the move reflected dissatisfaction with Sykes' performance.

Last December, the group reported interim pre-tax losses of £2.34m (£802,000 profit).

"We want to support the company and bring about an improvement," Mr Murray's spokesman added.

Mr David Hubbard, group chairman, said the board would fight the rebel action and would seek the support of institutional shareholders.

Opposition by institutional investors defeated Mr Murray 18 months ago after the last battle for control. Andrews Sykes has now offered Mr Murray board representation, but not majority control. His spokesman said the offer had not been rejected, but described the extraordinary meeting as a parallel tactic.

Andrews Sykes shares closed up 5p at 90p.

# Visa EMEA spending rises 13% to $183bn

By Alison Smith

The amount of spending using Visa cards within the Europe, Middle East and Africa region (EMEA) totalled $183bn (£125.3bn) in 1993, some 13 per cent higher than in 1992.

The number of Visa EMEA card transactions rose by almost 5 per cent to 2.36bn, while the number of Visa cards in existence rose by more than 5 per cent to 70.8m.

Mr Jean-Jacques Desbons, president and chief executive of Visa EMEA, said the organisation was confident that growth "will continue throughout the next year and will increase further as the world economy starts picking up."

Both the increases in cardholder spending in terms of US dollars and in the number of cards in 1993 against the previous year are lower in percentage terms than annual increases since 1989.

Mr Desbons also said Visa planned to introduce its Electron card into the UK before the end of the year. It is already available elsewhere and can be used only through electronic means. Because each transaction would be authorised individually by the banks, the card would offer greater security, and so banks might be prepared to make it available to more of their customer base than existing cards.

Visa EMEA represents about 36 per cent of Visa International's worldwide sales volume.

## NEWS IN BRIEF

**BARING SECURITIES** Emerging Markets Index Tracker Fund: Net asset value at December 31 $14.67 (£10) against $10.50 issue price. Net realised gain for period April 15 to December 31 1993 $814,000.

**BEAUFORD** has received valid acceptances in respect 6.24m ordinary shares allotted by rights, representing 76.37 per cent of the issue.

**BORTHWICKS** has made two property disposals for £600,000 – in line with book value.

**BURMINE** has received valid acceptances in respect of 19.3m Europa Minerals Group ordinary shares (78.5 per cent) and has extended its offer to March 29. Acceptances of the linked Austmin offer had been received in respect of 45.1m fully paid ordinary shares, (63.9 per cent).

**BWD SECURITIES**, Yorkshire-based financial services group, has completed a contract to purchase a freehold office building being constructed in Sheffield for £559,300.

**CANNON STREET** Investments has sold Thierry's Wine & Food Services for a nominal consideration to Mr Thierry Cabanne and Mr John Hayston who are directors of Thierry's.

**CENTRAL EUROPEAN** Growth Fund has received applications in respect of 24.7m ordinary shares (with warrants attached). Accordingly, the international placing has been increased and 175m ordinary shares (with warrants) have been placed firm, making the total size of the issue 200m shares (with warrants). Some $200m (£137m) has been raised. Dealings are expected to start on March 21.

**COUNTY SMALLER** Companies Investment Trust: 4.97 per cent of open offer of C shares taken up. The placing and open offer raised a total of £35.8m. Change of name to NatWest Smaller Companies Investment Trust agreed.

**CRAY ELECTRONICS** has sold Nexus Custom Electronics to Jaco Electronics for $1.6m (£1.1m)

# Evans Halshaw beats forecast with £7.81m

By Paul Cheeseright, Midlands Correspondent

Evans Halshaw, the Birmingham-based motor distribution and vehicle management group, yesterday delivered its promise of a fourfold increase in 1993 profits and prompted a 17p rise in the share price to 549p.

It announced pre-tax profits of £7.81m for the 12 months to December, compared with £1.71m for 1992.

Last November, when the group bought TK Motor Group, it forecast 1993 profits of £7.5m.

Earnings per share climbed from 5.4p to 24.3p, providing cover of 1.86 times for the increased dividend.

The proposed final is 9.2p (7.65p), making a total of 13p, against 11.25p for 1992 when payments to shareholders were partially financed from reserves.

Turnover rose from £341.5m to £404.7m as the new and used car market revived. New car sales were 28 per cent ahead and used car sales 16 per cent ahead of 1992.

However, the staple source of Evans Halshaw's profits – the servicing, parts sales and accident repair market – was flat until towards the end of the year.

Geoffrey Dale: car sales buoyant in 1994 so far

This after-market provided 62 per cent of group profits, compared with 70 per cent in 1992. There was no absolute decline of earnings from the after-market, but its share of group profits fell because earnings from car sales rose.

Capital investment, notably in a second motor village at Solihull, West Midlands, where five dealerships are grouped together, totalled £5.1m last year. Mr Geoffrey Dale, chairman and chief executive, expects spending this year to be slightly less.

"Across the group, car sales have been buoyant in the first two months of 1994 and our trading results are significantly ahead of the same period last year," Mr Dale said.

● COMMENT

Evans Halshaw is riding up the economic cycle and its profits would no doubt increase even if it did nothing except avoid silliness. In fact, it is expanding into a fragmented market with costs already pared. It is now obtaining the benefits of its investment of the last two years. Solihull alone this year should sell 5,000 cars. It is developing other streams of revenue like the sale of fleet management software. It is unrealistic to expect another fourfold profits increase, but feasible to think of pre-tax profits this year pushing towards £13m to give earnings per share of about 40p. On a prospective multiple of less than 14, it looks as if they have some way yet to motor, always providing that economic recovery is sustained.

# Hall Engineering leaps to £8.6m and lifts dividend

By Andrew Baxter

Hall Engineering (Holdings) yesterday announced a sharp rise in 1993 pre-tax profits from a restated £2.36m to £8.56m and is raising its dividend for the year by 10 per cent to 9.5p, with a final of 3.02p.

The Shrewsbury-based metal stockholding, steel products and automotive engineering group benefited from higher margins in its steel reinforcement business, especially in the first half, the completion of its UK rationalisation and another rise in profits from associated companies in the Pacific Rim.

Pre-tax profits for 1992 have been restated for FRS 3, and would have been £5.6m on a pre-FRS 3 and pre-exceptional cost basis.

Sales last year rose 8 per cent from £135.7m to £146m, and also by 8 per cent, to £182m, if share of associates' sales is included.

Earnings per share rose to 19.18p, against 3.05p in 1992 when there was a loss per share of 1.67p under the basic calculation including exceptional items.

In metal stockholding, losses were cut by £800,000 to £183,000, while the steel reinforcement business turned a £1.5m loss into a £62,000 profit.

Profits in the engineering division fell by £1m to £3.2m, due mainly to reduced profits and redundancy costs in Stadco's pressings division. Profits in the automation division were slightly ahead.

Mr Richard Hall, chairman, said the takeover of Rover by BMW could help Stadco win business for the first time from the German car group, and Stadco's recently-announced joint venture with Honda Engineering would not be affected.

On the outlook, Mr Hall said he would be very disappointed if the company could not further improve profits slightly this year. In some businesses, confidence is much higher than at the same time last year, although others are still indirectly affected by the recession in continental Europe.

# Wainhomes share issue priced at 170p

By Andrew Taylor, Construction Correspondent

Wainhomes, the Chester-based housebuilder, yesterday announced details of its plans to raise £30.5m from a flotation and offer for sale at 170p a share.

The total amount to be raised is £41.9m including the sale of 5.8m shares by existing institutional shareholders.

The issue will give the company a market value of about £106m. It plans to place 16m shares mostly with institutions while offering a further 8.62m shares for sale to the public. After the sale it will have 62.24m shares in issue.

Wainhomes is forecasting earnings of not less than 9.3p per share for the year ending March 31, putting the group on a p/e of 18.3 times the issue price.

It said that if it had been already quoted it would have recommended a total dividend of 4.2p net, representing a notional gross dividend yield of 3.1 per cent.

The company is the latest in a growing list of UK housebuilders to issue shares to finance land purchases to take advantage of the housing market recovery. It is forecasting pre-tax profits of £6.1m for the year to the end of March, a 15 per cent gain on the previous year's £5.3m.

It expects to have sold about 950 homes by the end of March, which should rise to between 1,200 and 1,500 next year, before increasing to 1,800. The company will use the proceeds to repay borrowings – currently £17m – and to buy land.

● COMMENT

On the basis of earnings and yield the offer price of 170p is at a slight premium to Beazer, a large proven housebuilder, which announced its flotation terms last week. Wainhomes as a small provincial builder however, has more to gain from increased volumes – and its margins stand comparison with the better builders. Given market demand for the sector, both Beazer and Wainhomes issues should succeed.

Restructuring costs and heavy interest charges behind deficit

# Ransomes £8.9m into the red

By Tim Burt

Ransomes, the manufacturer of grass-cutting equipment, yesterday reported sharply increased losses as it struggled with the twin burdens of large-scale restructuring and heavy debt.

The two factors led to pre-tax losses of £8.9m in the 12 months to December 31, compared with a restated 1992 deficit of £600,000.

Mr John Clement, chairman, blamed the decline on a restructuring programme involving a 12 per cent cut in the workforce, the removal of a tier of senior management and the contraction of its operating divisions.

The programme led to a threefold increase in exceptional charges to £5.8m.

Operating profits, meanwhile, fell by 35 per cent to £5.3m amid intense competition in the US and flat sales in Europe.

The figures were dented further by interest charges of £8.4m (£8.7m) on net borrowings of £75.3m (£76.1m), representing gearing of 450 per cent.

Despite the problems, Mr Clement, who took over as chairman last October, said its principal bankers had agreed to maintain existing borrowing facilities of £120m.

They have also backed moves to reshape the group by Mr Peter Wilson, appointed chief executive last autumn.

Mr Wilson initiated the redundancy programme, closed some overseas facilities and reorganised group operations in two new divisions – commercial and consumer.

Profits in the commercial operation fell sharply to £1.76m (£7.11m) following the group's failure to exploit market opportunities – particularly among golf course operators. Its poor performance was offset by increased demand in the consumer division, which saw operating profits increase 25 per cent to £3.52m.

Group turnover rose slightly to £165.8m (£156.6m).

Losses per share worked through at 26.1p against a restated 11.5p.

The company, which omitted its interim dividend, is also passing the final on both its ordinary and cumulative preference shares.

● COMMENT

Ransomes is paying the price for its dash for growth in 1989 when it acquired Cushman, the US grass machinery group, for $150m (£103m). Although, the new management has begun to tackle the debt burden left by that purchase, it faces an uphill struggle. The pressure has been increased by its decision to change the year end to September, leaving only 10 months to produce some positive results. Nevertheless, it claims to have already stripped out $10m of costs in the US and £1.5m at home. Analysts, who were unwilling to make profit forecasts, warned the group would have to make operating gains of more than £5.7m just to pay its dividend liability and generate earnings per share.

# Poland's biscuit market crumbles to McVitie's

By Christopher Bobinski in Warsaw

A large share of Poland's biscuit market yesterday fell to McVitie's, a United Biscuits subsidiary, when the biscuit and snacks producer agreed to pay £19.1m for 80 per cent of the San factory in Jaroslaw, the country's last large biscuit plant still in state hands.

Last year Jacobs Suchard bought the Olza plant in Cieszyn, while Bahlsen, a German snack producer, took control of Skawina, another biscuit producer in southern Poland.

These purchases came as PepsiCo Foods International was developing its bourse-listed Wedel chocolate factory, bought in 1991, into a salty snacks producer which looks set to double its 1993 net profit of 330bn zlotys (£9.7m) this year.

Both RJR Nabisco and PepsiCo bid for San, which reported a £1.8m net profit last year, as did the French BSN food group which has yet to purchase a snacks plant in Poland.

Mr Hartwig Conzelmann, of McVitie's said yesterday that his company was planning to build on San's 20 per cent market share and "dominate the country through a new nationwide marketing network".

Yesterday's agreement also spoke of plans for expansion from San's base in south east Polandinto Belarus and the Ukraine and the company is considering building a salty snacks plant.

McVitie's intends raising San's capital by £6.7m this year and investing a further £8.4m over the next two years. It will be preparing a prospectus for a Warsaw stock market listing within nine months and the £6.7m capital increase could well come from the local capital market. McVitie's has promised to retain a 51 per cent in San for three years.

The Central European Trust advised the Polish government on the transaction while McVitie's was advised by Schroders.

McVitie's bought Gyori Keksz, Hungary's largest biscuit company in 1991.

# Lionheart back in black with £1.77m

Lionheart, the Cheshire-based paint brushes and housewares group, returned to profit in 1993 with £1.77m pre-tax, a £2.64m turnround on 1992's deficit of £870,000. Mr Paul Lever, chairman, said an acquisition was now likely within months, writes Ian Hamilton Fazey.

Turnover rose by 7 per cent to £46.7m (£43.6m), giving a profit-to-sales ratio of 3.8 per cent. With earnings per share of 0.49p (losses 0.59p) a final dividend of 0.2p is proposed making 0.3p (0.2p) for the year.

The group returned to the dividend list only two years ago after reconstruction under Mr Lever, the chairman and former chief executive of Crown Paints.

Talks are understood to have begun about an acquisition with an announcement in the first half of the current year.

# A £50m magic wand from Ford

## Kevin Done on plans to revive the ailing Aston Martin Lagonda

Ford, the US motor manufacturer, is planning to transform the fortunes of Aston Martin Lagonda, the UK luxury sports car maker in which it acquired a 75 per cent stake in 1987.

Accounts filed at Companies House disclose for the first time the financial scope of the project to develop a new range of Aston Martin sports cars, the DB7, which are due to enter production next month.

Ford has injected £50m in new equity to fund the peak financing requirements of the DB7 programme, in the process lifting its shareholding to 99.5 per cent.

The DB7 programme has imposed a heavy burden on Aston Martin Lagonda's finances.

The group's losses in the last two years – £18.9m in 1993 and £16m in 1992 – were incurred after charges to the profit and loss account for the development of the DB7 totalling £13.7m in 1993 and £6.6m in 1992, including £2.1m for the original feasibility study.

The DB7 programme has led to a far-reaching reorganisation of the group.

The board now includes Mr Jackie Stewart, the former Formula 1 world champion, Mr Nick Scheele, chairman and chief executive of Jaguar, and Mr Tom Walkinshaw, whose TWR motor sports engineering group has played a significant role in the DB7 project.

The Aston Martin Lagonda group accounts disclose that JaguarSport, a 50/50 Jaguar/TWR joint venture of which Mr Walkinshaw is a director, was paid £10.1m in 1993 and £5.3m in 1992 for providing engineering services for the development of the DB7.

Jaguar is 100 per cent owned by Ford.

The new Aston Martin sports car, expected to sell for below £80,000, is heavily dependent on outside suppliers.

Body panels and welded bodies are to be supplied by Motor Panels, a subsidiary of the Mayflower specialist automotive engineering and design group.

The bodies will be painted by Rolls-Royce Motor Cars' plant at Crewe, Cheshire, and the cars will be assembled at the plant in Bloxham, Oxfordshire, which has previously built the Jaguar XJ220 super car.

The plant will be taken over this year by Aston Martin Lagonda. The DB7 engines will be assembled by TWR.

Last year Aston Martin produced only 144 cars at its Newport Pagnell plant in its traditional Virage/Vantage range, which sell from £134,000 to £178,000, but the group's output is now forecast to increase fivefold with DB7 production set to total 600-700 a year.

Output of the DB7 starts next month with deliveries beginning in the UK in the summer and in the US and Canada in the autumn of 1995. Output next year is expected to total 625.

While the DB7 has been under development the existing Aston Martin business based on the Virage/Vantage range has been under heavy pressure as a result of recession in the US and UK.

Turnover fell from £27.3m in 1990 to £20.8m in 1991 and £12.4m in 1992, although sales began to recover to £15.9m last year with a pick-up in both the UK and the US. The workforce has been drastically reduced to an average 285 last year from 359 in 1992, 448 in 1991 and 522 in 1990.

## Dividend increase reflects company's optimism on prospects

# Delta falls slightly to £53.4m

By Andrew Bolger

Delta, the cables and engineering group, reported flat annual results yesterday, but signalled guarded optimism about the economic outlook by increasing its dividend for the first time since 1990.

Pre-tax profits dipped from £55.1m to £53.4m in the year to January 1, mainly because of higher interest charges following its £37m purchase of the outstanding 36 per cent stake in Delta Crompton Cable Holdings from BTR, the industrial conglomerate. Sales rose from £786m to £833m.

Earnings per share increased marginally to 23.1p (23p). A final dividend of 10.3p lifts the total to 14.5p (14p).

Mr Robert Easton, chief executive, said Delta was one of the first UK companies to freeze dividends as the downturn took hold, but now hoped it had seen the bottom of the recession in continental Europe.

The upbeat tone was carefully qualified by Delta, which in September saw its shares marked down sharply after it warned that the UK recovery in manufacturing was more anaemic than many observers were suggesting.

Mr Geoffrey Wilson, chairman, said yesterday: "Whilst current patterns of demand remain patchy, early indications suggest a strengthening in some sectors. Whilst we have seen transient effects before, there is now greater evidence to suggest that the economic tide may be finally on the turn."

Delta said it was another tough year, with continuing depressed and fiercely competitive trading. European construction markets showed little recovery.

Mr Wilson said: "Early signs of more encouraging activity in the UK soon relapsed and demand then persisted at depressed levels. Prices remained under pressure, particularly in cables."

Delta shed 800 jobs last year, bringing the total employed down to 13,300. The group has cut its workforce by a third since 1989. Mr Easton said he would "go on trimming – but the battle will moderate".

The cables division suffered particularly from UK price wars, with operating profits lower at £5.89m (£8.68m). Circuit protection dipped to £15.8m (£17.1m) and engineering to £19.9 (£22.2m). Industrial services however, rose to £18.5m (£12.8m).

Trevor Humphries

Robert Easton: hoping he had seen the bottom of the recession

● **COMMENT**

Actions speak louder than words, and Delta's willingness to let dividend cover fall to 1.6 strikes a more positive note than the chairman's heavily hedged statement on prospects. Analysts were struck by how tough things were in the cable market, but still believe Delta's willingness to reduce its cost base makes it heavily geared to any upturn. Action, rather than further talk, on a possible US acquisition would also be appreciated. The shares, down 7p to 522p, are on a prospective multiple of about 19. The 20 per cent premium to the market reflects Delta's recovery stock status, but does not look unjustified.

# Crockfords gambling profits rise 16%

By David Blackwell

Crockfords, the casino company that was reversed into TV-am last summer, lifted profits from its gambling business by 16 per cent in 1993. Operating profits from the continuing gambling side rose from £19.8m to £23m on gaming turnover up from £44.4m to £51.3m.

At the pre-tax level profits for the year to end-December were £23.2m against £38m in 1992, with the 1992 figure including £15.7m of operating profits from TV-am, which stopped broadcasting on December 31 1992.

Crockfords opened London's first legal casino in Curzon Street in 1961. Last August the company reversed into TV-am, which had lost its licence and was planning a voluntary liquidation.

Mr Garry Nesbitt, chairman, said the group was firmly established at the upper end of the London gaming market.

While the number of casinos in London was unchanged at 21, the total gaming income was 34 per cent ahead at £304m. "I believe that a significant proportion of this increase may have been from the higher value players for whom we cater," Mr Nesbitt said.

Basic earnings per share were 16.18p (24.05p).

A final dividend of 2.5p is proposed for the first four months of the year, equivalent to 7.5p for the full year.

Mr Nesbitt said the strategy was to develop the existing club, on which £700,000 was spent last year, and to look out for other London casinos. It would also be seeking acquisitions or start-up opportunities "in Europe and other overseas areas where gaming is well regulated".

● **COMMENT**

Profits at Crockfords depend on a small number of big hitters – the prospectus said that over three years ten exceptional players had accounted for 50 per cent. Clearly the company needs at least one more casino to diversify its risks. But it is highly cash generative and ungeared, so should be able to move quickly once an opportunity arises. Given the same level of business this year earnings could reach more than 16.5p. A dividend of 8p would represent a yield of more than 6.5 per cent – worth the gamble.

# Heywood Williams in sixfold rise to £35.2m

Andrew Taylor,
Construction Correspondent

Pre-tax profits of Heywood Williams Group, the building and automotive components group, rose more than six times in 1993 from £5.5m to £35.2m.

The company was assisted by significant gains following a series of disposals and acquisitions. Operating profits, even after stripping out these benefits, still rose by 86 per cent from £8.02m to £14.99m.

The £95m sale of the group's UK glass division to Pilkington added a further £15m to these profits. Another £2.99m came from the first six months earnings of LaSalle-Deitch, which supplies components and furnishings for manufactured homes in the US.

Interest on Heywood's cash balances, currently about £10m, increased pre-tax profits by another £500,000, compared with a debit of £3.02m.

Bridgewater, the UK automotive glass replacement business acquired last autumn, and which is in the process of being re-organised, also contributed a small profit.

Since the year end Heywood has completed the acquisition of Bristol Products, the US plumbing components supplier, for $81.2m (£53.4m). The purchase was funded by a rights issue which raised £52.4m at the end of last year.

The company, as forecast, is paying a final dividend of 8.5p (8p) making a total for the year of 13p (12.5), the first dividend increase for two years.

Earnings per share were 36.2p (1.7p) or 32.9p (1.7p) diluted or 15.5p (1.7p) before exceptional profit on the disposal to Pilkington. Turnover fell from £389.5m to £365.6m.

The shares following the announcement rose 7p to 437p compared with a rights issue price in December of 280p.

Mr Ralph Hinchliffe, chairman, said: "The sale of the under-performing UK glass businesses, and the acquisitions we have made to secure and strengthen key market positions in the more buoyant US manufactured housing and recreational vehicles markets, has transformed our prospects."

● **COMMENT**

The tide is starting to turn in favour of Heywood Williams' main markets. US housing and automotive businesses, accounting for almost half of group turnover, are growing stronger as the economy recovers. Bad winter weather, also, will have had less of an impact on manufactured homes than on general housebuilding. In the UK, the homes market should continue to improve, while increased investment in depots should offset any temporary softening of the market following last year's introduction of windscreen checking in MoT tests. Pre-tax profits could approach £40m this year. A quality management and strong balance sheet makes the company worth an investment at this level.

# Cost cutting helps lift Scholes 84%

By Simon Davies

Scholes Group, the electrical installation equipment group, yesterday announced an 84 per cent increase in pre-tax profits from £1.3m to £2.4m for the six months to December, despite a marginal increase in UK sales.

Turnover rose 5 per cent to £31.1m, but this was boosted by exports, which increased by 21 per cent to £3.8m and now account for 12 per cent of group sales.

Scholes' earnings growth was achieved primarily through further lowering of the company's cost base, but also through some price increases in its major business, manufacturing switchgear for the domestic housing market.

Operating profit margins increased from 5.5 per cent to 8.3 per cent at the interim stage, and Mr Bill Riches, chairman, said he was confident further operational streamlining could be achieved.

Mr Riches said: "Management continues to focus on lowering the group's cost structure and pursuing ways of enhancing manufacturing productivity."

He said it would be tough for the company to achieve further price increases, however, due to increasing competition from European manufacturers prepared to buy market share at the expense of profit margins.

The company remains cash positive, and its net cash position increased by 37 per cent to £2.2m in December.

Scholes also announced that it had agreed to sell its 17 per cent stake in Malaysian-listed PWE Industries.

The company will pay an interim dividend of 1.7p (1.6p). Earnings per share increased from 2.4p to 4.3p.

# Improved production helps Aviva cut losses to $2.63m

By Peggy Hollinger

Aviva Petroleum, the small US-based oil and gas explorer, quoted in the UK, yesterday announced sharply lower net losses of $2.63m (£1.8m), against $10.23m last year, because of improved production from the group's Colombian project.

The better result was achieved on virtually static oil and gas sales of $10.68m, against $10.42m last time.

The loss per share was reduced from 124 cents to 11 cents. As in the past there is no dividend.

Mr Ron Suttill, chief executive, said he was confident the group would be able to achieve profits in spite of a depressed oil price.

Aviva was aiming to break even by the end of the current year, he said.

He stressed the potential of further development of the Colombian project, jointly owned with Ecopetrol, the state energy company.

By 1995 Aviva hoped to earn some 24,000 barrels a day from its share of the Colombian fields, which would result in a net cash flow contribution of about $12m a year, Mr Suttill said.

Net production from Colombia increased by 54 per cent to 279,000 barrels during the year. Mr Suttill said the increase, combined with a 10 per cent rise in US gas prices, more than offset a decline in oil and gas volumes in the US and reductions in the US and Colombian oil price. Currently all of Aviva's Colombian production is sold to Ecopetrol.

# Seafield ahead to £1.62m

Pre-tax profits of Seafield Resources, the USM-quoted oil and gas exploration company, rose from £1.06m to £1.62m in the year to end-December.

At the operating level profits were up from £632,000 to £1.5m. Turnover grew by 39 per cent from £5.55m to £7.74m, the bulk of which – £6.8m – was generated in the UK from the group's 5 per cent interest in the Victor gas field.

As part of last year's overhaul of North Sea taxation rules, companies were prevented from offsetting exploration and appraisal spending against income from fields which incur Petroleum Revenue Tax.

Although the terms were ultimately modified to include a limited form of transitional relief, the outcome this time suffered from a surge in the tax charge from £200,000 to £967,000. This impacted on earnings, which fell from 1.7p to 1.3p.

Operating cash flow was up 82 per cent at £4.84m (£2.66m).

Mr John Raitt, chairman, said that hydrocarbons had been encountered in all five UK wells in which the company participated.

Two of these wells were significant discoveries, and one successfully appraised an extension to the Victor field, confirming additional reserves.

The balance sheet remained strong with no debt, he added.

The company said it intended to apply for a full listing when the simplified, low cost, procedure for USM companies had been finalised.

# Rugby Estates net worth will triple after flotation

By Simon Davies

Rugby Estates, the property investment company run by the former property team at Hillsdown, the food group, is planning to raise £20m from a flotation which will triple its net worth.

Rugby Estates was set up in 1990, 51 per cent owned by the management, led by Mr David Tweeddale-Tye, chairman, and Mr Andrew Wilson, managing director, and 49 per cent by Hillsdown. It started from scratch and had net assets of £6.8m at the end of 1993, and a property portfolio now valued at £29.2m.

The management is offering a three-year-old company which made pre-tax profits of only £2m in 1993. But they boast a long and profitable history with Hillsdown, which almost floated its property arm in 1987.

Mr Tye ran Hillsdown's property arm throughout the 1980s. He built up gross assets of £100m and pre-tax profits of £18m at the market peak of 1989, and succeeded in selling around two thirds of its portfolio before the slump.

Rugby will raise £19.7m net of expenses from the share placement, of which £4.7m will be used to repay a loan to Hillsdown and £2.6m to buy a portfolio of properties from the food group. Gearing will fall to 5 per cent, providing scope for new investment.

Hillsdown is selling its entire shareholding, valued at about £4m, through the placement. The management will own about 13 per cent of the enlarged company.

Mr Tye said Rugby would continue to focus on retail properties, which represent 80 per cent of the current portfolio. It is also likely to remain an active property trader.

Rugby's speciality is buying secondary market properties where it can add value through intensive management. The company's first investment, the Brunswick Centre, has appreciated by 93 per cent since its purchase for £2.85m in January 1991.

The full prospectus will be issued on March 30, and dealings are expected to commence on April 8.

# Likely £60m tag on Robert Wiseman

By James Buxton

Robert Wiseman Dairies, the Scottish liquid milk processor and distributor, yesterday issued the pathfinder prospectus for the institutional placing which should lead to it obtaining a stock market listing by the end of the month.

The placing, by Panmure Gordon, should raise between £15m and £16m, leaving 75 per cent of the company in family hands. It is likely to value the company at about £60m.

The terms of the placing will be announced on March 22.

Robert Wiseman concentrates on supplying branded milk in cartons to stores in Scotland and is expanding in the north of England from a base in Manchester.

In the 39 weeks to January 1 1994 turnover was £44.26m and pre-tax profit was £4.25m.

About half the placing will finance a milk processing plant in Manchester while the rest will be to complete the recent purchase of Mackie's dairy near Aberdeen and future acquisitions.

# Everest shares fall 9p on warning about static second half results

Shares in Everest Foods tumbled 9p to 68p yesterday after the West Midlands-based egg and chip producer said it was unlikely to achieve full year profits in accordance with market expectations.

Mr Bob Gilbert, chairman, said the trend towards economy products had resulted in severe pressure on margins.

This meant that pre-tax profits fell from £1.18m to £1.08m in the six months to November 30, although turnover grew by nearly £3m to £19m.

The company had taken steps to make manufacturing processes as cost effective as possible. However, Mr Gilbert warned that if current trading conditions persisted, full year profits were unlikely to improve substantially on the interim figure.

Although earnings per share slipped from 3.15p to 2.9p, the interim dividend has been held at 1.2p and a scrip dividend alternative proposed.

# Graseby surges ahead to £9.57m

By Paul Taylor

Graseby, the medical electronics, product monitoring, environmental and defence technology group, yesterday reported sharply higher 1993 profits reflecting growing international sales, lower interest costs and the absence of exceptional charges.

Pre-tax profits for the year to end-December jumped to £9.57m from the depressed £1.02m recorded in 1992, when they were reduced by £4.3m of net exceptional costs.

Earnings per share jumped to 11.4p (1.3p) and, in line with the board's previously announced decision, the final dividend is being reduced to 3.3p (7.6p) making a total for the year of 6.6p (10.9p). The shares closed down 5p at 181p.

Turnover increased by 10.8 per cent to £113.7m (£102.6m) including £15.4m (£22.4m) from discontinued operations. Sales from continuing operations grew by 22 per cent to £98.7m with exchange rate movements accounting for just over a third of the increase.

International sales grew by 21 per cent, excluding exchange rate movements, reflecting the group's reduced dependence on the domestic market.

Operating profits increased to £11m (£7.85m) including a £501,000 contribution from discontinued operations. In 1992 discontinued operations reduced profits by £1.32m.

The advance was led by an exceptionally strong performance by the defence business, where a number of large orders were completed resulting in the technology division reporting profits of £4.2m (£571,000) on sales up 24 per cent to £34.3m.

In contrast, operating profits and trading margins slipped in the three other divisions despite increased sales.

Net interest costs fell to £1.4m (£2.52m) partly reflecting a decline in year-end borrowings from £20.7m to £15.9m, representing gearing of 66 per cent – down from 99 per cent.

● **COMMENT**

Graseby has completed its transformation from a group dependent on the volatile defence and component sectors to an international instrument supplier focused on four distinct value-added markets. The balance sheet is now in much better shape and borrowings should fall further – even without the deferred flotation of Graseby Anderson in the US. Although several of its markets – including the UK medical market – face pricing pressures, the overall trading margin should edge higher again this year towards the group's 15 per cent target. Pre-tax profits of about £10m this year should provide earnings of about 11.7p. The shares are trading on a prospective p/e of 15.5 and look slightly undervalued.

## COMMODITIES AND AGRICULTURE

# Fundamental policy choice seen for EU farmers

By Alison Maitland

European farmers face a stark choice before the end of the decade between tighter restraints on the use of land and chemicals or the complete abolition of price support.

This is believed to be the central message of a detailed strategy document to be considered today by the council of the National Farmers' Union of England and Wales.

The NFU's long-term strategy group, which produced the report, believes the recent Gatt deal will lead to another major shake-up of the Common Agricultural Policy before 2000.

"Current CAP policies are not going to increase consumption or bring down the production of cereals and beef sufficiently to allow the EU to meet its obligations under the Gatt settlement," it says. "EU farmers are approaching a fundamental policy choice."

This runs counter to assurances from the European Commission and the UK government that no further fundamental change will be needed in sectors subject to current CAP reforms to comply with EU commitments under the Gatt deal.

The report is understood to rule out the option of exit bonds, under which current agricultural support systems would end overnight and farmers would be compensated with a fixed, finite payment, which would be tradeable.

The strategy group says this could push up the EU's annual spending on agriculture – currently Ecu29bn – by 60-70 per cent in the short term and would be politically unacceptable because it would lead to high rural unemployment.

It also dismisses the extension of output quotas – such as those on milk – to new sectors, saying this would be complicated to administer and would conflict with the general reduction in government intervention in industry.

The choice, therefore, would be between tighter controls on inputs – for example, by increasing the amount of set-aside land or reducing the amount of nitrogen used – or abolishing the link between support payments to farmers and their production levels.

Farm incomes would be better protected under a system of input controls, assuming these would continue to be accompanied by subsidised exports and import tariffs. "But they may not be sustainable (beyond the 1990s) if future Gatt rounds force lower levels of border protection and export subsidies," says the report.

The decoupling option would expose EU farmers to competition with world prices, putting the full burden of support payments on the taxpayer. The report suggests EU cereal prices could fall by a further 30 per cent before reaching world price levels and that this might entail an unacceptably high level of compensation.

The NFU plans to consult its 100,000 members, as well as the government, the wider agricultural industry, and other European farming groups, in the difficult task of achieving a consensus on future strategy.

# 'Green' paper makers find themselves out of pocket

## Buyers are reluctant to pay adequate premiums for the chlorine-free product, writes **Bernard Simon**

The environmental movement has for years pressed pulp and paper mills to cut their use of chlorine, which they claim is necessary to produce strong, bright paper.

A growing number of producers, especially in Europe, have gone all the way. Sensing a strong resistance among their customers to environmentally harmful processes, some mills have spent heavily on processes that completely eliminate chlorine as a bleaching agent in pulp and paper production.

Questions are now being raised however, whether the producers have gone too far. Evidence is mounting that customers are reluctant – at least for the time being – to put their money where their mouths are.

Chlorine-free papers are not commanding the premium prices producers expected, and which are required to recoup their sizeable investments in a pioneering technology.

Doubts about the market's willingness to pay for the ultimate in environmentally-friendly paper are especially evident in North America, where the vast majority of producers is strongly resisting pressures to move towards the elimination of chlorine from pulp-making processes.

Mr Matthew van Hook, vice-president of the American Forest and Paper Association's pulp group, told the AFPA's annual meeting last week that "the jury is still out on the environmental impacts of totally chlorine-free (TCF) processes themselves, not to mention their technological and economic feasibility".

Chlorine owes its popularity as a bleaching agent to its ability to remove unwanted resins and fatty acids from wood pulp while leaving intact the cellulose fibres required for paper-making.

But chlorine is also a heavy polluter, adding toxic by-products such as dioxins and chlorinated organic compounds, known as AOXs, to pulp mill effluent.

It has increasingly been supplanted as a bleaching agent by hydrogen peroxide, supplemented in some cases by an ozone-bleaching process and by enzymes.

Chlorine-free pulp is especially popular in Germany, where the environmental crusade against the forestry industry is strongest.

Germany, Switzerland and Austria consumed almost 1.9m tonnes of totally chlorine-free (TCF) pulp last year out of total European demand of about 3.1m tonnes. Jaakko Poyry, the Finnish forest-products consultancy, predicts that European demand will jump to between 5m and 6m tonnes by the end of the decade.

For the present however, supply exceeds demand. Prices for northern bleached softwood kraft pulp, the industry staple, are currently around $450 a tonne.

Mr Martin Granholm, president of Kymmene, the Finnish forest-products group, says that the present premium for TCF pulp is only about 10 to 15 per cent, which is well below the figure of some $130 a tonne that forestry companies say they require to reimburse the extra expense of installing non-chlorine bleaching equipment.

In a speech at last week's AFPA meeting, Mr Granholm said it was "quite probable that some over-capacity will be created in Europe for TCF pulps. This is predicted to lower the price premium that TCF pulps have had".

Only one mill in North America, a 700-tonnes-a-day facility in California operated by Louisiana-Pacific, at present produces totally chlorine-free pulp. One-fifth of its 1993 output was chlorine-free, and it is scheduled to be in continuous TCF production by September 1995.

The mill's environmental benefits are undeniable. Its effluent has a hazy, pale yellow tint, compared to the coffee-coloured waste spewed out by mills using chlorine. The levels of toxic AOX and dioxins are so small as to be virtually unmeasurable.

But Louisiana-Pacific is far from recouping its investment of about $100m. Weak demand forced the mill to close during the last few months of 1993. It reopened in January and produced TCF pulp for just over a month before being shut down again on March 2. The company has yet to decide when it will restart.

# Malaysian rubber and tin output decline further

By Kieran Cooke in Kuala Lumpur

Malaysia's declining role as a commodity producer is highlighted by statistics released here on 1993 rubber and tin production – two commodities in which, until fairly recently, Malaysia led the world.

The Malaysian department of statistics says the country's total natural rubber production in 1993 was 1.07m tonnes, a drop of 98,000 tonnes, or 8 per cent, from the 1992 figure. Within that smallholder output declined 7 per cent while estate production dropped 12 per cent.

Exports of natural rubber also dropped – by 9 per cent to 937,000 tonnes.

The decline in tin-in-concentrates production was sharper, by 28 per cent to 10,384 tonnes in 1993.

Malaysia's is industrialising fast and commodities are playing a decreasing role in the overall economy. Serious labour shortages and low prices are also forcing people to abandon labour intensive agricultural activities.

● A surge in car sales in the US is being seen as the main reason for a rally in natural rubber prices which, after several months in the doldrums, reached a five-year high on far eastern markets last week. Traders say tight supply due to prolonged monsoon rains in rubber producing areas has also helped prices.

# Brazil seeks markets for orange juice

## US imports are expected to fall further, writes **Ronald van de Krol**

Brazil, the world's biggest exporter of frozen concentrated orange juice with a commanding 86 per cent share of the international market, will need to step up its sales efforts in Europe and Asia to compensate for further declines expected in exports to the US.

Mr Rogerio Braga, president of Cambuhy Citrus, one of Brazil's largest orange-processing companies, believes that the country's share of the US market is likely to fall to between 5 and 10 per cent by the end of the 1990s, partly as a result of the recently agreed North American Free Trade Agreement. This compares with the heyday of Brazilian exports to the US in the 1970s, when 60 per cent of Brazil's total production of frozen concentrated orange juice was sold in North America.

"Florida and Mexico, which has been granted special tariff conditions under Nafta, will certainly be able to supply almost all of North America's demand," he told an international fruit conference last week in Rotterdam.

Speakers at the conference, which was organised by the port of Rotterdam and Rabobank, the Dutch bank that specialises in agri-business, said that the world's fruit sector also faced challenges caused by changes in the way fruit and fruit juices were marketed. Increasingly, fruit growers and food retailers were attempting to eliminate "middlemen" such as brokers, import agents, packers and wholesalers.

Mr Braga said the decline in orange juice sales to the North American market over the past few decades was probably irreversible, meaning that Brazil would have to concentrate on Europe, already its biggest market, and on new markets in Asia such as Korea.

Despite sharp increases in exports to Europe, there was room for further growth, he said, because consumption of fruit juice was barely half the US figure of 29 litres a person a year. In some countries, such as France, Italy and Spain, consumption is still in single digits.

Consumption in Asia is low in absolute terms but rising rapidly.

"It took us 15 years to see Europeans consuming orange juice at half the levels of Americans," Mr Braga said. "We might be able to get south-east Asia to that level in half that time."

Besides shifts in trade flows, Brazil and other fruit producers are grappling with the shake-up in traditional relations between food retailers and food suppliers.

The rise of discount chains and "own label" products in established supermarkets has affected every link of the chain, from growers to packers. "Retailers are cutting their fat and have put tremendous pressure on the food processing industry," Mr Braga explained.

At the Netherlands' largest supermarket chain, Albert Heijn, the trend was towards concluding partnerships directly with growers of fruits and vegetables, said Mr Krijn Dorsman, executive vice-president of merchandising. "There are too many links in the chain between supplier and consumer," he said, noting that every link pushes up the retail price of food.

The Dutch supermarket group has therefore moved towards a policy of working with one exclusive partner for every product or product group in the fruit and vegetable sector. This partner undertakes to provide sufficient supplies to cover the supermarket chains' needs.

Mr Fred Hofman, a board member of the Bremen-based Atlanta Group, one of Germany's biggest fruit importers, told the conference he believed that importers and brokers would continue to have a role to play.

He added, however, that they would need to concentrate more on providing services, such as quality control and the arranging of "environmental-friendly" transport and packaging.

MARKET REPORT

# Coffee and cocoa make further gains

London Commodity Exchange COFFEE futures maintained Monday's enthusiasm early on, the May position peaking at $1,325 a tonne. The rally quickly ran out of steam as a sluggish New York market helped to take the wind out of London's sails but the May price held on to $10 of its rise to close at $1,316. COCOA'S rally also continued, with nearby prices touching three month highs late in the day.

Compiled from Reuter

**LME WAREHOUSE STOCKS** (As at Monday's close) tonnes

| | | |
|---|---|---|
| Aluminium | +250 | to 2,589,825 |
| Aluminium alloy | −120 | to 45,640 |
| Copper | −5,325 | to 532,150 |
| Lead | −175 | to 332,325 |
| Nickel | +942 | to 134,928 |
| Zinc | +1,650 | to 1,073,150 |
| Tin | +605 | to 23,270 |

## COMMODITIES PRICES

### BASE METALS

**LONDON METAL EXCHANGE**
(Prices from Amalgamated Metal Trading)

■ ALUMINIUM, 99.7 PURITY ($ per tonne)

| | Cash | 3 mths |
|---|---|---|
| Close | 1272.5-3.5 | 1301-2 |
| Previous | 1272-5 | 1296-7 |
| High/low | 1263 | 1304/1282 |
| AM Official | 1263-3.5 | 1284.5-5 |
| Kerb close | | 1298-9 |
| Open int. | 270,601 | |
| Total daily turnover | 53,833 | |

■ ALUMINIUM ALLOY ($ per tonne)

| | Cash | 3 mths |
|---|---|---|
| Close | 1220-30 | 1235-40 |
| Previous | 1212-5 | 1227-30 |
| High/low | | 1220 |
| AM Official | 1210-5 | 1225-30 |
| Kerb close | | 1230-40 |
| Open int. | 4,549 | |
| Total daily turnover | 660 | |

■ LEAD ($ per tonne)

| | Cash | 3 mths |
|---|---|---|
| Close | 453-4 | 467-8 |
| Previous | 449-50 | 463.5-4 |
| High/low | 438.5 | 467/448 |
| AM Official | 438-8.5 | 453-4 |
| Kerb close | | 465-6 |
| Open int. | 36,529 | |
| Total daily turnover | 5,262 | |

■ NICKEL ($ per tonne)

| | Cash | 3 mths |
|---|---|---|
| Close | 5530-5 | 5590-600 |
| Previous | 5495-505 | 5560-70 |
| High/low | 5410/5400 | 5610/5430 |
| AM Official | 5405-10 | 5464-5 |
| Kerb close | | 5580-5 |
| Open int. | 50,927 | |
| Total daily turnover | 12,319 | |

■ TIN ($ per tonne)

| | Cash | 3 mths |
|---|---|---|
| Close | 5430-40 | 5485-9 |
| Previous | 5425-35 | 5475-80 |
| High/low | 5385 | 5490/5410 |
| AM Official | 5380-5 | 5430-5 |
| Kerb close | | 5450-5 |
| Open int | 19,833 | |
| Total daily turnover | 5,442 | |

■ ZINC, special high grade ($ per tonne)

| | Cash | 3 mths |
|---|---|---|
| Close | 929-30 | 947-8 |
| Previous | 930.5-1.5 | 949-50 |
| High/low | 921.5 | 947/937 |
| AM Official | 921-1.5 | 939-9.5 |
| Kerb close | | 945-6 |
| Open int | 112,092 | |
| Total daily turnover | 24,664 | |

■ COPPER, grade A ($ per tonne)

| | Cash | 3 mths |
|---|---|---|
| Close | 1940-1 | 1955-6 |
| Previous | 1930.5-1.5 | 1944-5 |
| High/low | 1922/1921 | 1959/1937 |
| AM Official | 1922-3 | 1938-9 |
| Kerb close | | 1957-8 |
| Open int. | 229,012 | |
| Total daily turnover | 72,671 | |

■ LME AM Official £/$ rate: 1.4907
LME Closing £/$ rate: 1.4914

Spot 1.4925 3 mths 1.4865 6 mths 1.4849 9 mths 1.4832

■ HIGH GRADE COPPER (COMEX)

| | Close | Day's change | High | Low | Open int | Vol |
|---|---|---|---|---|---|---|
| Mar | 92.20 | +1.10 | 92.30 | 90.95 | 3,745 | 383 |
| Apr | 92.15 | +1.25 | 92.00 | 91.10 | 1,171 | 49 |
| May | 92.05 | +1.15 | 92.10 | 90.45 | 37,534 | 5,631 |
| Jun | 91.55 | +1.10 | - | - | 843 | 3 |
| Jul | 91.10 | +1.10 | 91.10 | 89.70 | 10,104 | 533 |
| Aug | 91.00 | +1.00 | - | - | 408 | - |
| Total | | | | | 64,416 | 7,244 |

### PRECIOUS METALS

■ LONDON BULLION MARKET
(Prices supplied by N M Rothschild)

| Gold (Troy oz.) | $ price | £ equiv. |
|---|---|---|
| Close | 386.00-386.50 | |
| Opening | 386.30-386.70 | |
| Morning fix | 388.25 | 258.663 |
| Afternoon fix | 387.10 | 259.607 |
| Day's High | 387.50-387.90 | |
| Day's Low | 385.80-386.20 | |
| Previous close | 386.90-387.30 | |

Loco Ldn Mean Gold Lending Rates (Vs US$)

| | | | |
|---|---|---|---|
| 1 month | 3.22 | 6 months | 3.49 |
| 2 months | 3.29 | 12 months | 3.75 |
| 3 months | 3.35 | | |

| Silver Fix | p/troy oz. | US cts equiv. |
|---|---|---|
| Spot | 365.50 | 545.00 |
| 3 months | 369.85 | 579.60 |
| 6 months | 374.25 | 555.30 |
| 1 year | 383.50 | 568.20 |

| Gold Coins | $ price | £ equiv. |
|---|---|---|
| Krugerrand | 387-390 | 259-262 |
| Maple Leaf | 397.15-399.65 | - |
| New Sovereign | 93-96 | 62-65 |

### Precious Metals continued

■ GOLD COMEX (100 Troy oz.; $/troy oz.)

| | Sett price | Day's change | High | Low | Open int | Vol. |
|---|---|---|---|---|---|---|
| Mar | 388.9 | +0.5 | - | - | 82,392 | 19,077 |
| Apr | 387.6 | +0.4 | 388.5 | 386.6 | - | 3 |
| May | 388.7 | +0.4 | - | - | 37,195 | 3,800 |
| Jun | 389.9 | +0.4 | 390.8 | 388.7 | 6,545 | 135 |
| Aug | 392.3 | +0.4 | 392.9 | 392.4 | 4,189 | 105 |
| Oct | 394.8 | +0.4 | 395.6 | 395.1 | 12,532 | 107 |
| Total | | | | | 142,432 | 23,752 |

■ PLATINUM NYMEX (50 Troy oz.; $/troy oz.)

| | Sett price | Day's change | High | Low | Open int | Vol. |
|---|---|---|---|---|---|---|
| Apr | 406.4 | +0.5 | 408.0 | 404.5 | 11,194 | 2,219 |
| Jul | 407.4 | +0.7 | 409.0 | 405.5 | 8,853 | 1,855 |
| Oct | 407.9 | +0.7 | 408.6 | 408.0 | 1,163 | 80 |
| Jan | 408.3 | +0.7 | 410.0 | - | 554 | 16 |
| Apr | 409.4 | +0.7 | 411.5 | - | 598 | 44 |
| Total | | | | | 22,369 | 4,214 |

■ PALLADIUM NYMEX (100 Troy oz.; $/troy oz.)

| | Sett price | Day's change | High | Low | Open int | Vol. |
|---|---|---|---|---|---|---|
| Mar | 134.55 | +0.45 | 135.50 | - | 17 | 5 |
| Jun | 134.70 | +0.45 | 135.50 | 133.25 | 4,040 | 140 |
| Sep | 134.40 | +0.45 | 134.25 | 133.75 | 397 | 2 |
| Dec | 133.90 | +0.45 | - | - | 181 | - |
| Total | | | | | 4,635 | 147 |

■ SILVER COMEX (100 Troy oz.; Cents/troy oz.)

| | Sett price | Day's change | High | Low | Open int | Vol. |
|---|---|---|---|---|---|---|
| Mar | 546.2 | +1.5 | 547.5 | 541.0 | 1,434 | 193 |
| Apr | 546.8 | +2.0 | 548.0 | 541.0 | 14 | - |
| May | 548.8 | +1.5 | 550.5 | 542.5 | 72,231 | 19,016 |
| Jul | 552.8 | +1.5 | 554.0 | 548.5 | 17,753 | 898 |
| Sep | 557.1 | +1.5 | 558.0 | 550.5 | 4,395 | 404 |
| Dec | 563.4 | +1.5 | 564.0 | 557.5 | 9,110 | 472 |
| Total | | | | | N/A | 21,144 |

### ENERGY

■ CRUDE OIL NYMEX (42,000 US galls. $/barrel)

| | Latest price | Day's change | High | Low | Open int | Vol |
|---|---|---|---|---|---|---|
| Apr | 14.68 | +0.19 | 14.77 | 14.43 | 74,807 | 36,779 |
| May | 14.70 | +0.16 | 14.78 | 14.46 | 81,218 | 27,879 |
| Jun | 14.78 | +0.15 | 14.84 | 14.57 | 73,963 | 9,033 |
| Jul | 14.88 | +0.11 | 14.93 | 14.71 | 34,176 | 6,009 |
| Aug | 15.02 | +0.11 | 15.03 | 14.86 | 16,015 | 2,779 |
| Sep | 15.16 | +0.10 | 15.19 | 15.03 | 18,718 | 945 |
| Total | | | | | 438,852 | 112,599 |

■ CRUDE OIL IPE ($/barrel)

| | Latest price | Day's change | High | Low | Open int | Vol |
|---|---|---|---|---|---|---|
| Apr | 13.92 | +0.16 | 13.93 | 13.73 | 44,580 | 17,528 |
| May | 13.62 | +0.15 | 13.63 | 13.39 | 63,544 | 26,013 |
| Jun | 13.60 | +0.10 | 13.60 | 13.39 | 22,118 | 7,472 |
| Jul | 13.71 | +0.24 | 13.71 | 13.48 | 11,628 | 1,988 |
| Aug | 13.75 | +0.20 | 13.78 | 13.58 | 7,989 | 1,748 |
| Sep | 13.90 | +0.14 | 13.90 | 13.70 | 4,257 | 602 |
| Total | | | | | 160,438 | 56,621 |

■ HEATING OIL NYMEX (42,000 US galls; c/US galls.)

| | Latest price | Day's change | High | Low | Open int | Vol |
|---|---|---|---|---|---|---|
| Apr | 43.95 | +0.64 | 44.20 | 43.20 | 42,084 | 10,166 |
| May | 42.90 | +0.46 | 43.05 | 42.30 | 51,105 | 5,789 |
| Jun | 42.85 | +0.51 | 43.15 | 42.40 | 33,964 | 3,911 |
| Jul | 43.55 | +0.46 | 43.60 | 43.00 | 22,054 | 1,823 |
| Aug | 44.40 | +0.46 | 44.45 | 43.85 | 9,314 | 619 |
| Sep | 45.45 | +0.51 | 45.60 | 45.20 | 7,646 | 958 |
| Total | | | | | 193,711 | 25,177 |

■ GAS OIL IPE ($/tonne)

| | Sett price | Day's change | High | Low | Open int | Vol |
|---|---|---|---|---|---|---|
| Apr | 137.75 | +1.75 | 138.50 | 135.75 | 32,641 | 7,633 |
| May | 137.00 | +1.50 | 137.75 | 135.25 | 15,011 | 3,990 |
| Jun | 137.25 | +1.25 | 137.75 | 136.00 | 16,392 | 939 |
| Jul | 138.75 | +1.00 | 139.00 | 137.50 | 12,075 | 652 |
| Aug | 140.75 | +1.25 | 140.75 | 139.50 | 5,367 | 205 |
| Sep | 143.00 | +1.25 | 142.25 | 142.00 | 3,561 | 150 |
| Total | | | | | 108,871 | 14,087 |

■ NATURAL GAS NYMEX (10,000 mmBtu.; $/mmBtu.)

| | Latest price | Day's change | High | Low | Open int | Vol |
|---|---|---|---|---|---|---|
| Apr | 2.075 | +0.025 | 2.080 | 2.040 | 16,733 | 7,852 |
| May | 2.120 | +0.011 | 2.130 | 2.100 | 13,920 | 3,424 |
| Jun | 2.120 | +0.004 | 2.125 | 2.100 | 9,855 | 1,317 |
| Jul | 2.115 | +0.001 | 2.125 | 2.105 | 8,962 | 1,080 |
| Aug | 2.130 | +0.004 | 2.135 | 2.120 | 9,509 | 289 |
| Sep | 2.150 | +0.003 | 2.155 | 2.140 | 10,414 | 343 |
| Total | | | | | 122,401 | 15,786 |

■ UNLEADED GASOLINE
NYMEX (42,000 US galls; c/US galls.)

| | Latest price | Day's change | High | Low | Open int | Vol |
|---|---|---|---|---|---|---|
| Apr | 45.55 | +0.67 | 45.70 | 44.70 | 31,432 | 10,807 |
| May | 46.10 | +0.47 | 46.30 | 45.35 | 45,435 | 7,147 |
| Jun | 46.35 | +0.32 | 46.55 | 45.80 | 21,327 | 2,029 |
| Jul | 46.40 | +0.27 | 46.40 | 45.65 | 7,438 | 634 |
| Aug | 46.05 | - | 46.05 | 45.80 | 6,496 | 665 |
| Sep | 45.90 | - | 45.85 | 45.80 | 3,859 | 403 |
| Total | | | | | 119,823 | 21,719 |

### GRAINS AND OIL SEEDS

■ WHEAT LCE (£ per tonne)

| | Sett price | Day's change | High | Low | Open int | Vol |
|---|---|---|---|---|---|---|
| Mar | 104.65 | +0.40 | 104.65 | 103.80 | 170 | 12 |
| May | 106.25 | +0.10 | 106.25 | 105.15 | 1,538 | 121 |
| Jun | 106.65 | -0.10 | 106.50 | 106.00 | 504 | 57 |
| Sep | 92.65 | +0.15 | 92.50 | 92.25 | 247 | 18 |
| Nov | 93.50 | +0.05 | 93.40 | 93.00 | 982 | 92 |
| Jan | 95.40 | +0.20 | 95.20 | 95.20 | 564 | 8 |
| Total | | | | | 4,134 | 308 |

■ WHEAT CBT (5,000bu min; cents/60lb bushel)

| | Sett price | Day's change | High | Low | Open int | Vol |
|---|---|---|---|---|---|---|
| Mar | 331/6 | +1/0 | 333/0 | 329/4 | 1,895 | 1,115 |
| May | 337/2 | +2/4 | 338/6 | 334/0 | 80,790 | 11,420 |
| Jul | 328/2 | +2/6 | 327/2 | 322/4 | 98,525 | 19,275 |
| Sep | 329/0 | +3/4 | 329/2 | 324/6 | 17,445 | 1,145 |
| Dec | 337/0 | +2/2 | 337/4 | 333/4 | 22,205 | 2,870 |
| Mar | 338/0 | +0/2 | 338/0 | 338/0 | 15 | - |
| Total | | | | | 221,100 | 36,830 |

■ MAIZE CBT (5,000 bu min; cents/56lb bushel)

| | Sett price | Day's change | High | Low | Open int | Vol |
|---|---|---|---|---|---|---|
| Mar | 277/2 | -3/0 | 280/0 | 277/0 | 10,325 | 12,845 |
| May | 284/2 | -2/6 | 287/0 | 284/0 | 605,375 | 158,265 |
| Jul | 288/0 | -2/4 | 290/4 | 287/6 | 560,905 | 78,720 |
| Sep | 276/4 | -1/4 | 278/2 | 276/0 | 128,905 | 8,635 |
| Dec | 264/4 | -1/2 | 266/0 | 264/0 | 291,795 | 53,890 |
| Mar | 270/4 | -0/6 | 272/0 | 270/0 | 18,390 | 1,340 |
| Total | | | | | 1.826M | 313,098 |

■ BARLEY LCE (£ per tonne)

| | Sett price | Day's change | High | Low | Open int | Vol |
|---|---|---|---|---|---|---|
| Mar | 105.35 | +0.10 | 105.25 | 104.75 | 32 | 53 |
| May | 105.45 | -0.05 | 105.25 | 105.25 | 195 | 11 |
| Sep | 93.30 | - | - | - | 139 | - |
| Nov | 95.00 | - | - | - | 85 | - |
| Jan | 98.65 | - | - | - | 13 | - |
| Mar | 97.00 | - | - | - | 15 | - |
| Total | | | | | 464 | 64 |

■ SOYABEANS CBT (5,000bu min; cents/60lb bushel)

| | Sett price | Day's change | High | Low | Open int | Vol |
|---|---|---|---|---|---|---|
| Mar | 686/4 | -1/4 | 689/0 | 685/0 | 9,225 | 9,430 |
| May | 689/4 | -0/6 | 692/4 | 687/0 | 310,320 | 244,420 |
| Jul | 691/0 | - | 694/4 | 688/0 | 229,685 | 77,950 |
| Aug | 683/0 | -0/4 | 685/4 | 680/4 | 36,220 | 3,450 |
| Sep | 667/2 | -3/0 | 670/0 | 666/4 | 19,270 | 1,700 |
| Nov | 658/4 | -4/0 | 659/6 | 655/4 | 151,135 | 50,675 |
| Total | | | | | 777,240 | 390,270 |

■ SOYABEAN OIL CBT (60,000lbs; cents/lb)

| | Sett price | Day's change | High | Low | Open int | Vol |
|---|---|---|---|---|---|---|
| Mar | 28.53 | +0.07 | 28.57 | 28.25 | 3,052 | 1,348 |
| May | 28.44 | +0.03 | 28.49 | 28.15 | 33,361 | 7,890 |
| Jul | 28.33 | +0.04 | 28.39 | 28.05 | 25,347 | 2,716 |
| Aug | 27.96 | +0.03 | 28.00 | 27.70 | 7,919 | 587 |
| Sep | 27.59 | -0.03 | 27.60 | 27.38 | 7,725 | 494 |
| Oct | 26.88 | -0.09 | 26.95 | 26.80 | 5,443 | 355 |
| Total | | | | | 87,588 | 14,328 |

■ SOYABEAN MEAL CBT (100 tons; $/ton)

| | Sett price | Day's change | High | Low | Open int | Vol |
|---|---|---|---|---|---|---|
| Mar | 197.3 | -0.1 | 197.5 | 196.4 | 1,947 | 1,271 |
| May | 198.1 | -0.5 | 199.3 | 197.5 | 30,936 | 28,937 |
| Jul | 198.7 | -0.1 | 199.6 | 198.2 | 23,672 | 11,551 |
| Aug | 198.9 | -0.6 | 199.2 | 198.9 | 6,797 | 1,291 |
| Sep | 195.5 | -0.2 | 196.5 | 195.5 | 5,636 | 362 |
| Oct | 193.5 | -0.3 | 194.8 | 193.5 | 2,991 | 427 |
| Total | | | | | 81,876 | 43,540 |

■ POTATOES LCE (£/tonne)

| | Sett price | Day's change | High | Low | Open int | Vol |
|---|---|---|---|---|---|---|
| Apr | 183.5 | -5.2 | 182.0 | 177.0 | 748 | 38 |
| May | 200.5 | -9.2 | 207.9 | 194.0 | 548 | 238 |
| Jun | 130.0 | - | - | - | 2 | - |
| Nov | 80.0 | - | - | - | - | - |
| Mar | 105.0 | - | - | - | - | - |
| Apr | 131.5 | -1.0 | 133.0 | 131.0 | - | 16 |
| Total | | | | | 1,511 | 290 |

■ FREIGHT (BIFFEX) LCE ($10/index point)

| | Sett price | Day's change | High | Low | Open int | Vol |
|---|---|---|---|---|---|---|
| Mar | 1155 | +7 | - | - | 300 | - |
| Apr | 1235 | +7 | 1235 | 1229 | 1,110 | 115 |
| May | 1235 | +13 | 1235 | 1231 | 287 | 51 |
| Jul | 1120 | +5 | 1120 | 1120 | 590 | 8 |
| Oct | 1265 | +7 | 1265 | 1265 | 241 | 5 |
| Jan | 1303 | +3 | - | - | 74 | - |
| Total | | | | | 2,687 | 179 |

| | Close | Prev |
|---|---|---|
| BFI | 1129 | 1123 |

**Minor Metals**
European free market, from Metal Bulletin. $ per lb in warehouse, unless otherwise stated (last week's in brackets, where changed). Antimony: 99.6%, $ per tonne, 1,750-1,810 (1,700-1,750). Bismuth: min. 99.99%, tonne lots 2.25-2.40 (2.25-2.45). Cadmium: min. 99.5%, 60-68 (63-70) cents a pound. Cobalt: MB free market, 99.8%, 22.50-23.50 (22.00-23.00); 99.3%, 17.80-18.70 (17.00-18.00). Mercury: min. 99.99%, $ per 76 lb flask, 90-100. Molybdenum: drummed molybdic oxide, 2.80-2.85. Selenium: min 99.5%, 3.80-4.55 (3.90-4.65). Tungsten ore: standard min. 65%, $ per tonne unit (10kg) $WO_3$, cif, 30-43 (28-43). Vanadium: min. 98%, cif, 1.35-1.45. Uranium: Nuexco exchange value, 7.00.

### SOFTS

■ COCOA LCE (£/tonne)

| | Sett price | Day's change | High | Low | Open int | Vol |
|---|---|---|---|---|---|---|
| Mar | 954 | +9 | 960 | 947 | 289 | 129 |
| May | 969 | +12 | 977 | 961 | 22,453 | 6,100 |
| Jul | 981 | +12 | 987 | 971 | 15,188 | 2,631 |
| Sep | 990 | +10 | 995 | 981 | 11,175 | 978 |
| Dec | 1001 | +12 | 1006 | 994 | 17,642 | 808 |
| Mar | 1018 | +10 | 1021 | 1010 | 22,730 | 868 |
| Total | | | | | 106,795 | 12,351 |

■ COCOA CSCE (10 tonnes; $/tonnes)

| | Sett price | Day's change | High | Low | Open int | Vol |
|---|---|---|---|---|---|---|
| Mar | 1214 | -15 | 1235 | 1225 | 56 | 31 |
| May | 1235 | -15 | 1252 | 1232 | 41,812 | 13,813 |
| Jul | 1258 | -13 | 1272 | 1254 | 18,870 | 4,300 |
| Sep | 1281 | -9 | 1290 | 1276 | 8,876 | 474 |
| Dec | 1313 | -7 | 1321 | 1303 | 6,457 | 212 |
| Mar | 1351 | -7 | 1366 | 1340 | 9,961 | 308 |
| Total | | | | | 95,488 | 20,426 |

■ COCOA (ICCO) (SDR's/tonne)

| Mar 14 | Price | Prev. day |
|---|---|---|
| Daily | 959.40 | 930.04 |
| Mar 15 | | |
| 10 day average | 922.27 | 918.64 |

■ COFFEE LCE ($/tonne)

| | Sett price | Day's change | High | Low | Open int | Vol |
|---|---|---|---|---|---|---|
| Mar | 1305 | +8 | 1313 | 1307 | 387 | 30 |
| May | 1317 | +11 | 1325 | 1306 | 16,283 | 2,495 |
| Jul | 1311 | +6 | 1320 | 1305 | 10,509 | 1,390 |
| Sep | 1309 | +5 | 1321 | 1305 | 4,992 | 347 |
| Nov | 1308 | +5 | 1322 | 1308 | 3,364 | 335 |
| Jan | 1308 | +4 | 1310 | 1305 | 5,074 | 354 |
| Total | | | | | 42,259 | 4,961 |

■ COFFEE 'C' CSCE (37,500lbs; cents/lbs)

| | Sett price | Day's change | High | Low | Open int | Vol |
|---|---|---|---|---|---|---|
| Mar | 79.50 | -0.20 | 80.25 | 79.00 | 209 | 47 |
| May | 81.40 | - | 81.55 | 80.60 | 34,171 | 11,835 |
| Jul | 82.75 | +0.10 | 82.85 | 81.90 | 9,425 | 2,032 |
| Sep | 84.05 | +0.10 | 84.10 | 83.15 | 5,470 | 346 |
| Dec | 85.10 | +0.10 | 85.10 | 84.50 | 3,595 | 162 |
| Mar | 86.05 | +0.15 | 86.05 | 85.90 | 1,093 | 2 |
| Total | | | | | 54,887 | 14,444 |

■ COFFEE (ICO) (US cents/pound)

| Mar 14 | Price | Prev. day |
|---|---|---|
| Comp. daily | 78.57 | 74.80 |
| 15 day average | 73.79 | 73.60 |

■ No7 PREMIUM RAW SUGAR LCE (cents/lbs)

| | Sett price | Day's change | High | Low | Open int | Vol |
|---|---|---|---|---|---|---|
| May | 12.31† | -0.24 | - | - | 1,268 | - |
| Jul | 12.70† | -0.15 | - | - | 2,738 | - |
| Oct | 12.10† | -0.08 | - | - | 130 | - |
| Jan | 12.05† | -0.05 | - | - | - | - |
| Total | | | | | 4,136 | N/A |

■ WHITE SUGAR LCE ($/tonne)

| | Sett price | Day's change | High | Low | Open int | Vol |
|---|---|---|---|---|---|---|
| May | 334.00† | -2.00 | 337.00 | 332.00 | 8,201 | 1,015 |
| Aug | 328.50† | -2.30 | 329.50 | 327.00 | 5,096 | 489 |
| Oct | 306.50† | -2.30 | 309.00 | 307.50 | 3,860 | 139 |
| Dec | 305.00† | -1.80 | 305.00 | 304.50 | 125 | 17 |
| Mar | 303.70† | -1.60 | - | - | 416 | - |
| May | 304.70† | -1.5 | - | - | 202 | - |
| Total | | | | | 18,107 | 1,649 |

■ SUGAR '11' CSCE (112,000lbs; cents/lbs)

| | Sett price | Day's change | High | Low | Open int | Vol |
|---|---|---|---|---|---|---|
| May | 12.13 | -0.21 | 12.23 | 12.01 | 63,659 | 12,758 |
| Jul | 12.29 | -0.13 | 12.35 | 12.16 | 33,451 | 5,687 |
| Oct | 11.79 | -0.13 | 11.86 | 11.73 | 28,589 | 3,794 |
| Mar | 11.31 | -0.11 | 11.40 | 11.30 | 11,834 | 2,695 |
| May | 11.29 | -0.11 | 11.30 | 11.30 | 1,633 | 87 |
| Jul | 11.29 | -0.10 | 11.37 | 11.36 | 1,012 | 64 |
| Total | | | | | 140,462 | 25,121 |

■ COTTON NYCE (50,000lbs; cents/lbs)

| | Sett price | Day's change | High | Low | Open int | Vol |
|---|---|---|---|---|---|---|
| May | 76.77 | +0.60 | 76.79 | 75.80 | 23,638 | 8,264 |
| Jul | 77.50 | +0.73 | 77.50 | 76.45 | 13,349 | 2,752 |
| Oct | 75.24 | +0.04 | 75.24 | 74.80 | 2,567 | 403 |
| Dec | 72.65 | +0.10 | 72.69 | 72.35 | 13,066 | 1,321 |
| Mar | 73.55 | -0.05 | 73.60 | 73.27 | 543 | 85 |
| May | 74.30 | +0.05 | 74.20 | 74.20 | 161 | 2 |
| Total | | | | | 53,366 | 12,803 |

■ ORANGE JUICE NYCE (15,000lbs; cents/lbs)

| | Sett price | Day's change | High | Low | Open int | Vol |
|---|---|---|---|---|---|---|
| Mar | 109.10 | -0.10 | 109.40 | 108.90 | 316 | 78 |
| May | 111.60 | -0.50 | 112.40 | 111.10 | 8,579 | 1,003 |
| Jul | 114.25 | -0.30 | 114.75 | 113.60 | 5,332 | 326 |
| Sep | 116.45 | +0.05 | 116.30 | 116.00 | 2,068 | 121 |
| Nov | 115.00 | -0.05 | 114.70 | 114.70 | 1,269 | 73 |
| Jan | 115.05 | -0.45 | 115.05 | 114.75 | 1,617 | 22 |
| Total | | | | | 19,363 | 1,623 |

**VOLUME DATA**
Open interest and Volume data shown for contracts traded on COMEX, NYMEX, CBT, NYCE, CME, CSCE and IPE Crude Oil are one day in arrears.
† Unofficial settlement prices.

### INDICES

■ REUTERS (Base: 18/9/31=100)

| Mar 15 | Mar 14 | month ago | year ago |
|---|---|---|---|
| 1822.0 | 1824.5 | 1779.1 | 1779.4 |

■ CRB Futures (Base: 4/9/56=100)

| Mar 14 | Mar 13 | month ago | year ago |
|---|---|---|---|
| 228.56 | 227.34 | 227.29 | 210.19 |

### MEAT AND LIVESTOCK

■ LIVE CATTLE CME (40,000lbs; cents/lbs)

| | Sett price | Day's change | High | Low | Open int | Vol |
|---|---|---|---|---|---|---|
| Apr | 76.375 | -0.200 | 76.975 | 76.350 | 35,987 | 4,834 |
| Jun | 74.000 | -0.175 | 74.350 | 73.975 | 23,869 | 3,623 |
| Aug | 72.625 | -0.075 | 72.875 | 72.550 | 12,156 | 1,099 |
| Oct | 73.475 | +0.075 | 73.725 | 73.325 | 8,965 | 544 |
| Dec | 73.800 | +0.050 | 73.900 | 73.650 | 2,265 | 93 |
| Feb | 73.400 | +0.025 | 73.600 | 73.400 | 853 | 4 |
| Total | | | | | 84,296 | 10,208 |

■ LIVE HOGS CME (40,000lbs; cents/lbs)

| | Sett price | Day's change | High | Low | Open int | Vol |
|---|---|---|---|---|---|---|
| Apr | 46.750 | -0.175 | 47.250 | 46.700 | 10,129 | 3,558 |
| Jun | 53.500 | -0.050 | 53.900 | 53.400 | 10,532 | 3,482 |
| Jul | 52.925 | +0.100 | 53.175 | 52.825 | 3,212 | 801 |
| Aug | 51.575 | +0.100 | 51.750 | 51.400 | 2,748 | 424 |
| Oct | 47.625 | +0.125 | 47.750 | 47.550 | 1,693 | 115 |
| Dec | 48.700 | +0.100 | 48.700 | 48.450 | 1,625 | 166 |
| Total | | | | | 30,294 | 8,389 |

■ PORK BELLIES CME (40,000lbs; cents/lbs)

| | Sett price | Day's change | High | Low | Open int | Vol |
|---|---|---|---|---|---|---|
| Mar | 54.750 | +0.650 | 55.300 | 54.300 | 151 | 85 |
| May | 55.550 | +0.525 | 56.300 | 55.200 | 6,089 | 3,675 |
| Jul | 55.725 | +0.600 | 56.375 | 55.250 | 2,863 | 1,212 |
| Aug | 53.575 | +0.425 | 54.100 | 53.200 | 525 | 80 |
| Feb | 58.625 | -0.325 | 58.950 | 58.600 | 38 | 11 |
| Mar | 58.350 | +1.150 | 58.350 | 58.000 | 3 | 1 |
| Total | | | | | 9,695 | 5,073 |

### LONDON TRADED OPTIONS

Strike price $ tonne — Calls — — Puts —

| ■ ALUMINIUM (99.7%) LME | May | Aug | May | Aug |
|---|---|---|---|---|
| 1275 | 46 | 76 | 25 | 37 |
| 1300 | 33 | 83 | 37 | 48 |
| 1325 | 23 | 51 | 51 | 61 |
| **■ COPPER (Grade A) LME** | **May** | **Aug** | **May** | **Aug** |
| 1900 | 82 | 141 | 24 | 44 |
| 1950 | 52 | 83 | 41 | 65 |
| 2000 | 31 | 60 | 72 | 91 |
| **■ COFFEE LCE** | **May** | **Jul** | **May** | **Jul** |
| 1250 | 81 | 98 | 14 | 37 |
| 1300 | 49 | 70 | 32 | 59 |
| 1350 | 27 | 49 | 60 | 88 |
| **■ COCOA LCE** | **May** | **Jul** | **May** | **Jul** |
| 925 | 55 | 82 | 11 | 26 |
| 950 | 38 | 67 | 19 | 36 |
| 975 | 25 | 53 | 31 | 47 |
| **■ BRENT CRUDE IPE** | **May** | **Jun** | **May** | **Jun** |
| 1300 | 81 | - | 34 | - |
| 1350 | 59 | 69 | 51 | - |
| 1400 | 33 | 44 | 84 | 99 |

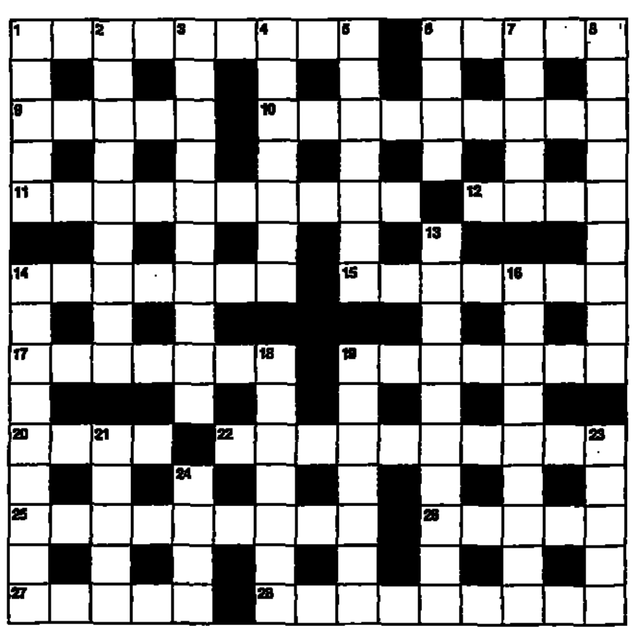
### LONDON SPOT MARKETS

| ■ CRUDE OIL FOB (per barrel/May) | | +or- |
|---|---|---|
| Dubai | $12.50-2.60w | +0.275 |
| Brent Blend (dated) | $14.19-4.22 | +0.220 |
| Brent Blend (May) | $13.59-3.60 | +0.200 |
| W.T.I. (1pm est) | $14.71-4.74 | +0.300 |
| **■ OIL PRODUCTS NWE prompt delivery CIF (tonne)** | | |
| Premium Gasoline | $150-152 | |
| Gas Oil | $139-140 | +1 |
| Heavy Fuel Oil | $74-76 | -2 |
| Naphtha | $132-134 | |
| Jet Fuel | $159-161 | +2 |
| *Petroleum Argus Estimates* | | |
| **■ OTHER** | | |
| Gold (per troy oz)♣ | $386.25 | -0.85 |
| Silver (per troy oz)♣ | 541.5c | -3.0 |
| Platinum (per troy oz.) | $403.65 | +0.65 |
| Palladium (per troy oz.) | $133.25 | +0.25 |
| Copper (US prod.) | 95.00c | |
| Lead (US prod.) | 35.00c | |
| Tin (Kuala Lumpur) | 14.08r | |
| Tin (New York) | 251.50c | -1.00 |
| Zinc (US Prime W.) | Unq. | |
| Cattle (live weight)† | 127.89p | +2.83* |
| Sheep (live weight)†♠ | 131.14p | +9.01* |
| Pigs (live weight) | 80.08p | -3.38* |
| Lon. day sugar (raw) | $299.50 | +4.50 |
| Lon. day sugar (wte) | $340.00 | -2.00 |
| Tate & Lyle export | £314.00 | +4.00 |
| Barley (Eng. feed) | Unq | |
| Maize (US No3 Yellow) | Unq | |
| Wheat (US Dark North) | £180.0x | |
| Rubber (Apr)¶ | 68.00p | |
| Rubber (May)¶ | 68.50p | |
| Rubber(KL RSS No1 Apr) | 244.50m | -1.00 |
| Coconut Oil (Phil)§ | $530.0x | |
| Palm Oil (Malay.)§ | $377.5t | |
| Copra (Phil)§ | $343.0 | |
| Soyabeans (US) | £183.0w | |
| Cotton Outlook A Index | 80.80c | -0.60 |
| Wooltops (64s Super) | 389p | |

£ per tonne unless otherwise stated. p pence/kg. c cents/lb. r ringgit/kg. m Malaysian cents/kg. v Oct/Dec w May. t Jul/Sep. x Apr/May. ¶ London Physical. § CIF Rotterdam. ♣ Bullion market close. ♠ Sheep (Live weight prices). * Change on week, provisional prices.

## CROSSWORD

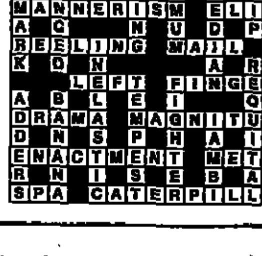
No.8,405 Set by HIGHLANDER



ACROSS
1 Company working for stable conditions underfoot (4,5)
6 Second wave yields reproductive cells (5)
9 Publish in secret initially and charge the heirs (5)
10 Vote takes university into dispersing contamination (9)
11 A last run at wild insects (10)
12 Bird employed by NCB, say? (4)
14 Main dish? (7)
15 Travel seated in explosive missile (7)
17 She puts actress's clothes on piece of furniture with drawers (7)
19 Confuse bony substance with source of nautical weather warning (7)
20 Refrained from taking abandoned port (4)
22 Copies shuffled and spread by church leaders (10)
25 Run off and seize hold of overturned vessel's propulsion aid (9)
26 Prunes in good condition on Saturday (5)
27 Patron of hotel in Prague stays there regularly (5)
28 They care madly about royal betrayal (9)

DOWN
1 Loud is not commonly lacking in volume (5)
2 Ray waves one to come up again (9)
3 Immature family has an effect inimical to the environment (10)
4 Take possession of how sterling identifies itself? (7)
5 Courageous lover (7)
6 Ethnic music only heard (4)
7 Brontë lifts fruit before end of July (5)
8 Brown follows fellow bowler perhaps in New York (9)
13 Analytical help over revised costing (10)
14 Pass between peaks with hunting spoils in travelling pouch (9)
16 Oriental case for grammarians stimulating the memory (9)
18 A sympathetic relationship hit by drink (7)
19 Descriptive of lens angle, I said (4-3)
21 Smith's equipment is fake (5)
23 Try two different directions for example (5)
24 Quietly take food and fuel (4)

Solution 8,404



# LONDON STOCK EXCHANGE

**MARKET REPORT**

## Share prices respond to strong gains in bonds

By Terry Byland, UK Stock Market Editor

Strong gains in British government bonds and further indications that economic recovery is showing through in corporate results laid the foundation for a 34-point advance in the FT-SE 100 Index yesterday. Trading volume gathered pace as the stock market moved ahead to a confident close.

Investors were encouraged by good news on US inflation, by confidence ahead of the Bundesbank's money market repos tender today and by another round of dividend increases from UK companies. The final reading put the FT-SE 100 at 3,267.4, with some analysts predicting that the 3,300 mark could be challenged again before the end of the week.

A week heavy with important economic statistics saw the opening of yesterday's session dominated by prospects for the US producer price index, announced at midsession in London.

News that the core index had risen by only 0.1 per cent in February, reducing the likelihood of a tightening in Federal Reserve credit policy, was well taken in Europe.

UK equities, which had made modest progress during the morning, began to move up strongly behind gains of more than a full point in long-dated government securities.

On the domestic front, the switch in market sentiment in favour of signs of economic recovery was encouraged first by news that UK construction industry orders had jumped by 16 per cent in the three months to January, and then by strong profits and dividend announcements from the construction and building sectors.

An increase of around one-third in the dividend payment from Wolseley, Britain's leading builders merchant, reinforced market confidence that higher payouts will provide the drive for the stock market.

Little heed was paid to the latest distributive trades survey from the Confederation of British Industry, which suggested a slowdown in the rate of retail sales increase.

Store and consumer issues mostly followed the market trend, as investors took the view that economic recovery will provide the basis for higher levels of consumer spending. Heavy trading in Barclays reflected continuing dividend optimism. The strength of sterling failed to deter shares in the big exporting firms.

The FT-SE Mid 250 Index gained 16.8 at 3,902.5 as buying spread through the list of building and construction shares, many of which are outside the FT-SE 100 stocks. By the end of the session, Seaq volume, at 616.1m shares, showed a 10 per cent increase from Monday's total. Retail, or customer, business on Friday was worth £1.25bn. While a little below last week's average, retail business in equities remained healthily profitable for London-based securities firms.

While sounding fully confident last night, market strategists pointed out that today will bring significant tests for shares and bonds in the form of the latest data on domestic retail sales, unemployment, average earnings and unit wage costs. All will be scanned for evidence of progress in the domestic economy, as well as for inflationary pressures.

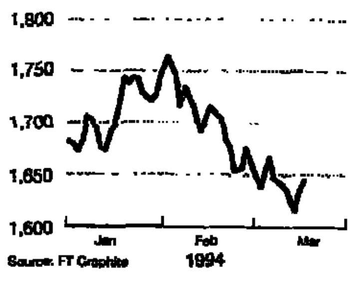
With Wall Street a shade lower at the London close, it was clear that attention had switched to Germany and that the UK market will focus closely today on the progress and outcome of the Bundesbank repos tender, where some analysts hope to see rates trimmed more sharply than they were last week.

**Account Dealing Dates**

| | | |
|---|---|---|
| *First Dealings: Feb 28 | Mar 14 | Mar 28 |
| Option Declarations: Mar 10 | Mar 24 | Apr 7 |
| Last Dealings: Mar 11 | Mar 25 | Apr 8 |
| Account Day: Mar 21 | Apr 5 | Apr 18 |

*New time dealings may take place from two business days earlier.

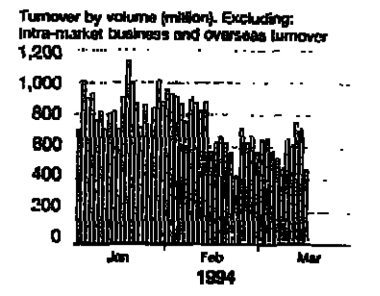
**FT-SE-A All-Share Index**



Source: FT Graphite

**Equity Shares Traded**

Turnover by volume (million). Excluding: Intra-market business and overseas turnover




■ **Key Indicators**

**Indices and ratios**

| | | | | | |
|---|---|---|---|---|---|
| FT-SE 100 | 3267.4 | +34.0 | FT Ordinary Index | 2569.3 | +23.1 |
| FT-SE Mid 250 | 3902.5 | +16.8 | FT-SE-A Non Fins p/e | 21.94 | (21.88) |
| FT-SE-A 350 | 1655.5 | +14.9 | FT-SE 100 Fut Mar | 3272.0 | +39.0 |
| FT-SE-A All-Share | 1646.57 | +13.79 | 10 yr Gilt yield | 7.02 | (7.18) |
| FT-SE-A All-Share yield | 3.51 | (3.54) | Long gilt/equity yld ratio: | 2.15 | (2.16) |

**Best performing sectors**

1 Building Materials ... +2.3
2 Water ... +1.9
3 Tobacco ... +1.8
4 Gas Distribution ... +1.7
5 Banks ... +1.5

**Worst performing sectors**

1 Other Services & Bsns ... -2.3
2 Household Goods ... -0.6
3 Building & Construct ... -0.5
4 Health Care ... -0.2
5 FT-SE SmallCap ex IT ... -0.0

## Builders led by Wolseley

News that UK construction orders rose 16 per cent in the quarter ending on January 31, plus stunningly good interim results from Wolseley, the UK's leading builders merchant, saw the shares spearhead a general upsurge in the building materials and merchants sector.

Wolseley's profits at £87m were around £17m higher than the most optimistic forecasts in the market, while the 33 per cent rise in the dividend compared with most expectations of an increase in the region of 10 per cent. BZW hoisted its current-year forecast for Wolseley from £153m to £187m and its 1995 estimate to £230m.

Mr Howard Seymour, building analyst at BZW, said Wolseley's "phenomenally good figures" confirmed the strong recovery coming through in the light end of the building market.

Wolseley finished 66 higher at a record 968p. Since their elevation to FT-SE 100 status last June, Wolseley shares have climbed 46 per cent, compared with a 12.3 per cent advance by the 100 index.

### Builders strong

Wolseley's excellent results were followed by news of a near four-fold profits increase from Heywood Williams, the building products group. Marley is also expected to report bumper profits with its figures this morning. A big line of Marley stock was taken out of the market last week, prompting speculation that the figures would be much better than the market expects. Most predictions for Marley point to pre-tax profits of £34m-plus.

Travis Perkins, the builders merchant, is expected to reveal more than doubled pre-tax profits in excess of around £20m tomorrow.

Marley rose 4 to 204p, Heywood Williams 7 to 437p, Graham Group, floated at 183p only a week ago, 8 to 214p, Meyer International 29 to 545p and Travis Perkins 13 to 359p.

At the heavy end of the building materials sector, hopes of an early reduction in German interest rates boosted Redland, up 9 at 571p, and RMC, 13 ahead at 972p.

Housebuilders, on the other hand, were unsettled by what was said to have been a flat and uninspiring post-results meeting with Wimpey and construction sector analysts.

"We were expecting a bullish statement on housebuilding but got a rather dismal appraisal," said one analyst. Current year profits estimates of up to £50m were said to have been trimmed back to £45m and less in some cases. Wimpey shares dropped to a session low of 206p following the analysts meeting, before steadying to close a net 8 off at 210p.

### Large MGN trade

Mirror Group Newspapers experienced exceptionally heavy turnover of 11m shares as the market responded enthusiastically to the latest figures and bought the stock up 7 to 197p.

A lift in advertising revenues and trading margins, together with far better than anticipated profits, saw forecasts raised to between £82m and £85m for 1994. The only concern was the slide in circulation following the price war started by News International.

The two English power generators, PowerGen and National Power, were among the best performers in a generally strong utilities area following a strong buy recommendation published by NatWest Securities. The broker's strategic assessment of the two companies focused on the long-term attractions of both companies. Upgrading the stocks to a buy NatWest highlighted strong dividend growth, lack of regulatory threats and recovering market share. PowerGen rose 13 to 552p and National Power 12½ to 463p. North West Water, up 20 to 546p, Severn Trent 15 better at 579p and Wessex Water 15 higher at 6671p, were the pick of the water stocks.

The placing of a block of 5.9m Vodafone shares at a discounted 564p by house broker UBS, to finance the acquisition of a one third stake in General Mobile Communications from Generale des Eaux of France, saw Vodafone dip 4 to 571p.

Saatchi & Saatchi slipped a penny to 141p in spite of returning to profitability. The market was disappointed by the group's margin growth. S.G. Warburg cut its 1994 profits forecast by 10 per cent to £30m.

The initial advance in electricals group Delta after the group revealed a higher than expected dividend increase proved short lived after brokers downgraded current year profit estimates. Analysts were particularly concerned by the continuing pressure on profits in the cable industry. The shares gave up 7 to 522p.

The list of brokers downgrading included Strauss Turnbull which trimmed its estimate by £4m to £59m. Several brokers advised investors to switch out of Delta and into BICC where the shares put on 9 to 440p.

UK airports operator BAA closed 13 ahead at 1001p, after a positive note on the stock from NatWest Securities. The securities house which expects 1994 profits of £324m said: "the company continues to produce traffic growth marginally ahead of our expectations giving us confidence in our full year profits forecasts."

Analysts returned positive from pre-close season meetings with Granada, helping the shares climb 6 to 561p amid profit forecast upgrades. Euro Disney shares opened sharply down following the weakness seen after the theme park group announced a financial rescue package on Monday. They later rallied, ending the day 5 ahead at 395p.

Reports of a further round of price cuts in the milk market hurt Unigate and Northern Foods, the shares sliding 3 to 148p and 2 to 218p respectively. Tesco, off a penny at 223p, was said to be applying the renewed pressure on suppliers, with expectations that the other big operators Argyll, 3 ahead at 254p, and J Sainsbury, 10 foward at 386p, are likely to follow suit. The news follows weekend reports that Asda, up a penny at 60¼p, was pressuring suppliers to turn price promotions into permanent price reductions.

### Other big moves

Elbief bounced back 4¼ to 21p after its leading shareholder Gedma Investments was believed to have successfully sold its 7 per cent stake in the photo frame and clock maker.

Research based pharmaceuticals group Scotia Holdings added a further 16 at 271p as investors focused on the new drugs in development.

Talk of stakebuilding in Owen & Robinson, the loss-making jewellery and sports footwear retailer, saw the shares climb 8 to 34p.

Concern over a boardroom tussle saw Takare, the nursing home group, fall 17 to 249p.

**MARKET REPORTERS:**
Christopher Price, Joel Kibazo, Peter John, Steve Thompson.

■ Other statistics, Page 21

### NEW HIGHS AND LOWS FOR 1993/94

NEW HIGHS (49).
BUILDING & CNSTRN (1) Bett Bros., BLDG MATLS & MCHTS (8) Alumasc, CRH, Epwin, St. Gobain, Wolseley, CHEMICALS (4) Akzo, Bayer, Hoechst, Porvair, DISTRIBUTORS (2) Evans Halshaw, Sanderson Bramall, ELECTRNC & ELECT EQUP (3) ASEA B, Eurotherm, Forward Technology, ENGINEERING (1) Atlas Copco B, ENG, VEHICLES (1) Volkswagen, EXTRACTIVE INDS (7) Anglo Amer. Coal, Int'l. Musto, Johannesburg Consld., Kidston Gold, NSM, Vogels, Walhalla, INSURANCE (1) Sedgwick, INVESTMENT TRUSTS (2) Aberforth Split Level Cap., Newmarket Venture Cap., INVESTMENT COMPANIES (3) Indonesia Equity Fd., Korea Liberal Wrts., Lydenburg, LEISURE & HOTELS (4) Barr & WAT A, Castle Communications, Crockfords, Stanley Leisure, MEDIA (3) Holmes Marchant, Sleepy Kids, Sunset & Vine, OTHER FINANCIAL (2) EFT, Energy Capital Wrts., PRTNG, PAPER & PACKG (2) Bunzl, Seppi, RETAILERS, FOOD (1) Greggs, RETAILERS, GENERAL (1) Sotheby's, SUPPORT SERVS (2) MITIE, Manpower Inc., TEXTILES & APPAREL (1) Claremont Garments, AMERICANS (3) Gillette, Lowe's, SOUTH AFRICANS (1) Anglo Amer. Inds.,

NEW LOWS (22).
GILTS (6) Treas. 9pc 1994, Exch. 12¼pc 1994, Exch. 13½pc 1994, Exch. 10¼pc 1995, Treas. 12pc 1995, Treas. 15¼pc 1996, DISTRIBUTORS (1) Welpac, ENGINEERING (1) Ferrum, FOOD MANUF (1) Everest Foods, HEALTH CARE (1) Life Sciences Intl., INVESTMENT TRUSTS (3) Baring Emrg. Euro., Kleinwort Euro. Prvt., Do Wrts, OIL EXPLORATION & PROD (1) Coplex Resources, PRTNG, PAPER & PACKG (1) Parkside Int'l., PROPERTY (1) Cathay Int'l., RETAILERS, GENERAL (1) Brown & Jackson, SUPPORT SERVS (1) Sherwood Computer Servs., TEXTILES & APPAREL (2) Haggas (J), Martin Int'l., AMERICANS (2) Amer. Cyanamid, NYNEX.

## EQUITY FUTURES AND OPTIONS TRADING

Continuing hopes of a reduction in interest rates, and a firm performance in bonds, helped stock index futures to a premium as the March contract pulled the underlying cash market higher, *writes Joel Kibazo.*

The opening of the Liffe March contract on the FT-SE 100 at 3,227 was 6 points below the previous night's close, which initially led dealers to expect a quiet session. But those early doubts soon faded, leaving March to advance for most of the session, with "solid US buying" said to have been prominent in the first part of the day.

Having touched the day's high of 3,278, the contract finished at 3,272, up 39 from its previous close and at a 6-point premium to cash. Volume at the official close was a healthy 16,480 contracts.

The Liffe Mid 250 March contract ended at 3,907 after business of 285 lots, and June, which becomes the market leader next week, saw volume of 225 contracts. On the OMLX, the screens showed there had been no trade in the FT-SE Mid 250 contract.

Turnover in Liffe traded options improved to 40,369 lots, with 21,792 contracts dealt in the FT-SE 100 option and 2,043 in the Euro FT-SE option. Ladbroke was the busiest stock option with a total of 2,309 trades.

■ FT-SE 100 INDEX FUTURES (LIFFE) £25 per full index point (APT)

| | Open | Sett price | Change | High | Low | Est. vol | Open int. |
|---|---|---|---|---|---|---|---|
| Mar | 3227.0 | 3272.0 | +39.0 | 3278.0 | 3227.0 | 20293 | 30694 |
| Jun | 3236.0 | 3283.0 | +39.5 | 3287.0 | 3236.0 | 6625 | 37290 |
| Sep | | 3301.5 | +39.5 | | | 0 | 680 |

■ FT-SE MID 250 INDEX FUTURES (LIFFE) £10 per full index point

| | Open | Sett price | Change | High | Low | Est. vol | Open int. |
|---|---|---|---|---|---|---|---|
| Mar | 3910.0 | 3907.0 | +12.0 | 3915.0 | 3900.0 | 276 | 681 |
| Jun | 3929.0 | 3923.0 | +9.0 | 3934.0 | 3919.0 | 216 | 615 |

■ FT-SE MID 250 INDEX FUTURES (OMLX) £10 per full index point

| | Open | Sett price | Change | High | Low | Est. vol | Open int. |
|---|---|---|---|---|---|---|---|
| Mar | | 3908.0 | | | | | 2,951 |
| Jun | | 3929.5 | | | | | 232 |

All open interest figures are for previous day. † Exact volume shown.

■ FT-SE 100 INDEX OPTION (LIFFE) (*3268) £10 per full index point

| | 3100 C | 3100 P | 3150 C | 3150 P | 3200 C | 3200 P | 3250 C | 3250 P | 3300 C | 3300 P | 3350 C | 3350 P | 3400 C | 3400 P | 3450 C | 3450 P |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mar | 174 | ½ | 125 | ½ | 77 | 2½ | 33½ | 11 | 8½ | 37 | 1½ | 83½ | ½ | 133½ | ½ | 183½ |
| Apr | 184 | 13½ | 143 | 22½ | 106 | 36 | 75 | 55 | 49 | 79 | 29½ | 110 | 17 | 147½ | 19 | 190½ |
| May | 207½ | 31½ | 171 | 44½ | 135½ | 59 | 107 | 80 | 79½ | 103½ | 58½ | 132 | 40½ | 164½ | 27 | 201½ |
| Jun | 225 | 45½ | 189½ | 59 | 154½ | 75 | 125½ | 95 | 98½ | 115 | 78 | 146½ | 57½ | 176½ | 44 | 213½ |
| Dec† | 301 | 104 | | | 238½ | 138½ | | | 181½ | 179 | | | 137 | 232½ | | |

Calls 8,877 Puts 13,278

■ EURO STYLE FT-SE 100 INDEX OPTION (LIFFE) £10 per full index point

| | 3075 C | 3075 P | 3125 C | 3125 P | 3175 C | 3175 P | 3225 C | 3225 P | 3275 C | 3275 P | 3325 C | 3325 P | 3375 C | 3375 P | 3425 C | 3425 P |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mar | 197 | ½ | 147 | ½ | 98 | 1½ | 62 | 7 | 17½ | 22 | 3½ | 58 | 1 | 103½ | ½ | 153 |
| Apr | 205 | 11 | 182 | 17½ | 123 | 28 | 89 | 43½ | 61 | 65½ | 39 | 93 | 23½ | 127½ | 13 | 167 |
| May | | | 189½ | 38 | | | 128 | 67½ | | | 67½ | 114 | | | 34 | 179½ |
| Jun | | | 204 | 48½ | | | 149 | 83 | | | 90 | 132 | | | 54 | 194½ |
| Sept† | | | 250½ | 79½ | | | 187½ | 113½ | | | 134½ | 158 | | | 93½ | 217 |

Calls 1,557 Puts 436 * Underlying index value. Premiums shown are based on settlement prices. † Long dated expiry months.

■ EURO STYLE FT-SE MID 250 INDEX OPTION (OMLX) £10 per full index point

| | 3950 C | 3950 P | 4000 C | 4000 P | 4050 C | 4050 P | 4100 C | 4100 P | 4150 C | 4150 P | 4200 C | 4200 P | 4250 C | 4250 P | 4300 C | 4300 P |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mar | 8 | 47 | 3½ | 93 | 1½ | 142½ | 1½ | 192½ | ½ | 242½ | ½ | 292½ | ½ | | ½ | |
| Apr | 56 | 89½ | 35 | 75½ | 22½ | 157½ | 13 | 198½ | 7½ | | 4½ | | 3½ | | 2 | |

Calls 5 Puts 50 Settlement prices and volumes are taken at 4.30pm.

## FT-SE Actuaries Share Indices — The UK Series

| | Mar 15 | Day's chge% | Mar 14 | Mar 11 | Mar 10 | Year ago | Div. yield% | Earn. yield% | P/E ratio | Xd adj. ytd | Total Return |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FT-SE 100 | 3267.4 | +1.1 | 3238.4 | 3191.9 | 3233.9 | 2918.3 | 3.70 | 5.74 | 21.21 | 23.12 | 1207.27 |
| FT-SE Mid 250 | 3902.5 | +0.4 | 3885.7 | 3857.4 | 3906.4 | 3118.9 | 3.14 | 4.95 | 24.90 | 14.80 | 1421.32 |
| FT-SE Mid 250 ex Inv Trusts | 3918.2 | +0.4 | 3900.9 | 3872.1 | 3922.9 | 3134.4 | 3.23 | 5.29 | 23.49 | 14.40 | 1422.17 |
| FT-SE-A 350 | 1655.5 | +0.9 | 1640.6 | 1621.7 | 1643.1 | 1442.4 | 3.57 | 5.55 | 21.97 | 10.45 | 1251.44 |
| FT-SE SmallCap | 2011.85 | ..... | 2011.70 | 2008.46 | 2019.53 | 1564.69 | 2.75 | 3.76 | 33.19 | 8.11 | 1533.05 |
| FT-SE SmallCap ex Inv Trusts | 1992.16 | ..... | 1992.48 | 1990.09 | 2000.17 | 1573.22 | 2.88 | 4.15 | 30.60 | 7.55 | 1520.10 |
| FT-SE-A ALL-SHARE | 1646.57 | +0.8 | 1632.78 | 1615.12 | 1635.49 | 1424.79 | 3.51 | 5.43 | 22.50 | 10.13 | 1266.47 |

■ **FT-SE Actuaries All-Share**

| | Mar 15 | Day's chge% | Mar 14 | Mar 11 | Mar 10 | Year ago | Div. yield% | Earn yield% | P/E ratio | Xd adj. ytd | Total Return |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 10 MINERAL EXTRACTION(18) | 2531.12 | +0.7 | 2512.97 | 2508.16 | 2526.98 | 2151.70 | 3.59 | 4.91 | 25.25 | 27.63 | 1000.97 |
| 12 Extractive Industries(4) | 3968.30 | +1.1 | 3924.49 | 3888.71 | 3921.70 | 3125.30 | 3.26 | 4.45 | 26.86 | 26.93 | 1077.27 |
| 15 Oil, Integrated(3) | 2433.11 | +0.7 | 2416.37 | 2418.38 | 2433.78 | 2083.40 | 3.71 | 5.12 | 24.32 | 31.89 | 983.34 |
| 16 Oil Exploration & Prod(11) | 1849.94 | ..... | 1848.35 | 1831.70 | 1858.31 | 2108.60 | 3.23 | 3.88 | 33.10 | 0.00 | 1049.00 |
| 20 GEN MANUFACTURERS(284) | 2174.76 | +0.8 | 2158.06 | 2139.80 | 2158.64 | 1734.70 | 3.43 | 3.88 | 33.17 | 11.18 | 1082.85 |
| 21 Building & Construction(31) | 1452.93 | -0.5 | 1460.28 | 1462.05 | 1493.00 | 911.70 | 2.45 | 3.08 | 42.27 | 2.61 | 1113.56 |
| 22 Building Matls & Merchs(30) | 2302.06 | +2.3 | 2250.58 | 2230.88 | 2258.73 | 1512.70 | 3.08 | 2.54 | 54.11 | 1.62 | 1055.06 |
| 23 Chemicals(20) | 2473.50 | +0.4 | 2463.87 | 2460.86 | 2461.84 | 2156.10 | 3.74 | 4.64 | 27.07 | 20.00 | 1073.60 |
| 24 Diversified Industrials(16) | 2173.45 | +0.7 | 2159.03 | 2131.63 | 2138.25 | 1879.60 | 4.23 | 4.23 | 30.84 | 24.90 | 1088.86 |
| 25 Electronic & Elect Equip(34) | 2119.84 | +0.8 | 2103.25 | 2086.84 | 2098.62 | 1881.40 | 3.47 | 6.01 | 20.41 | 2.50 | 1008.09 |
| 26 Engineering(72) | 1971.92 | +0.4 | 1964.68 | 1952.02 | 1972.79 | 1474.50 | 2.77 | 2.92 | 46.49 | 8.73 | 1104.87 |
| 27 Engineering, Vehicles(12) | 2350.27 | +0.5 | 2338.96 | 2354.41 | 2391.69 | 1806.90 | 4.43 | 3.16 | 42.19 | 20.61 | 1116.91 |
| 28 Printing, Paper & Pckg(27) | 3032.80 | +0.5 | 3018.09 | 2999.29 | 3034.48 | 2312.80 | 2.69 | 4.11 | 29.45 | 1.60 | 1165.21 |
| 29 Textiles & Apparel(22) | 1977.43 | +0.7 | 1963.45 | 1929.57 | 1926.41 | 1887.70 | 3.32 | 4.97 | 25.18 | 1.56 | 1089.79 |
| 30 CONSUMER GOODS(93) | 2885.47 | +0.8 | 2861.28 | 2839.20 | 2882.88 | 2939.10 | 3.99 | 7.03 | 16.77 | 19.08 | 987.11 |
| 31 Breweries(17) | 2251.04 | +0.7 | 2236.30 | 2210.55 | 2248.05 | 2182.30 | 4.06 | 7.83 | 16.07 | 11.01 | 987.00 |
| 32 Spirits, Wines & Ciders(10) | 3132.32 | +0.8 | 3107.24 | 3078.21 | 3108.61 | 2969.00 | 3.38 | 5.85 | 19.96 | 19.93 | 1026.39 |
| 33 Food Manufacturers(23) | 2348.11 | +0.2 | 2342.88 | 2337.84 | 2360.85 | 2473.80 | 4.03 | 7.39 | 16.07 | 11.13 | 980.21 |
| 34 Household Goods(12) | 2714.29 | -0.6 | 2730.51 | 2727.53 | 2770.31 | 2403.10 | 3.16 | 6.76 | 17.13 | 1.07 | 948.38 |
| 36 Health Care(20) | 1784.42 | -0.2 | 1787.91 | 1799.27 | 1807.49 | 1801.50 | 3.09 | 5.63 | 21.55 | 2.98 | 1012.22 |
| 37 Pharmaceuticals(10) | 3087.38 | +1.2 | 3050.68 | 3025.61 | 3040.03 | 3283.80 | 4.07 | 7.19 | 16.24 | 35.65 | 961.14 |
| 38 Tobacco(1) | 4077.10 | +1.8 | 4005.79 | 3947.07 | 3969.84 | 4095.20 | 5.17 | 8.10 | 14.50 | 0.00 | 878.05 |
| 40 SERVICES(218) | 2101.60 | +0.7 | 2086.34 | 2070.07 | 2094.11 | 1822.70 | 2.80 | 5.30 | 22.97 | 8.06 | 1010.99 |
| 41 Distributors(31) | 3095.29 | +0.4 | 3083.89 | 3071.17 | 3092.20 | 2561.20 | 2.75 | 4.88 | 24.80 | 5.57 | 1047.96 |
| 42 Leisure & Hotels(22) | 2325.66 | +0.9 | 2304.45 | 2286.59 | 2296.52 | 1766.50 | 3.09 | 4.37 | 27.56 | 13.25 | 1127.80 |
| 43 Media(37) | 3261.09 | +0.4 | 3248.58 | 3226.26 | 3278.45 | 2216.10 | 1.92 | 3.99 | 29.93 | 14.30 | 1115.28 |
| 44 Retailers, Food(17) | 1654.80 | +1.2 | 1634.66 | 1594.42 | 1623.62 | 2150.70 | 3.74 | 9.65 | 12.66 | 1.93 | 960.97 |
| 45 Retailers, General(43) | 1758.49 | +0.9 | 1742.11 | 1729.77 | 1744.32 | 1610.50 | 2.71 | 5.27 | 23.79 | 4.34 | 920.06 |
| 48 Support Services(40) | 1738.60 | +0.2 | 1735.50 | 1725.36 | 1750.52 | 1576.20 | 2.29 | 6.60 | 17.25 | 1.96 | 1037.52 |
| 49 Transport(16) | 2594.23 | +0.8 | 2572.37 | 2578.14 | 2605.11 | 2098.30 | 3.24 | 3.49 | 33.21 | 5.82 | 896.25 |
| 51 Other Services & Business(12) | 1226.60 | -2.3 | 1255.71 | 1258.05 | 1292.96 | 1342.90 | 3.87 | 3.63 | 40.03 | 0.97 | 1032.48 |
| 60 UTILITIES(36) | 2449.18 | +1.0 | 2425.04 | 2375.12 | 2432.16 | 2137.60 | 4.08 | 7.12 | 17.34 | 5.60 | 918.00 |
| 62 Electricity(17) | 2337.94 | +1.1 | 2313.08 | 2237.29 | 2292.70 | 1721.60 | 3.54 | 10.59 | 11.60 | 15.65 | 944.25 |
| 64 Gas Distribution(2) | 2085.73 | +1.7 | 2050.65 | 2006.02 | 2038.12 | 1980.80 | 5.74 | ‡ | ‡ | 0.00 | 921.53 |
| 66 Telecommunications(4) | 2152.93 | +0.4 | 2143.97 | 2114.18 | 2180.80 | 1979.50 | 3.67 | 5.63 | 21.71 | 0.09 | 885.42 |
| 68 Water(13) | 1904.13 | +1.9 | 1867.73 | 1842.61 | 1852.70 | 1803.20 | 4.66 | 13.35 | 8.81 | 3.46 | 916.15 |
| 69 NON-FINANCIALS(629) | 1772.13 | +0.8 | 1757.87 | 1741.07 | 1761.66 | 1565.26 | 3.62 | 5.58 | 21.94 | 8.87 | 1223.32 |
| 70 FINANCIALS(104) | 2379.38 | +1.1 | 2352.73 | 2309.78 | 2348.51 | 1888.20 | 3.73 | 5.41 | 22.65 | 29.00 | 924.20 |
| 71 Banks(10) | 3082.39 | +1.5 | 3036.63 | 2963.78 | 3019.80 | 2282.80 | 3.49 | 5.18 | 23.69 | 55.86 | 911.57 |
| 73 Insurance(18) | 1357.13 | +0.7 | 1347.23 | 1329.92 | 1348.28 | 1358.00 | 4.70 | 8.03 | 14.56 | 13.32 | 904.95 |
| 74 Life Assurance(6) | 2555.40 | +1.2 | 2525.29 | 2488.84 | 2516.97 | 2602.70 | 4.58 | 4.76 | 26.44 | 2.91 | 840.20 |
| 75 Merchant Banks(6) | 2989.72 | +0.8 | 2967.20 | 2852.74 | 2961.84 | 2282.40 | 3.05 | 7.89 | 15.45 | 11.44 | 879.92 |
| 77 Other Financial(25) | 2033.16 | +0.3 | 2027.79 | 1999.09 | 2013.96 | 1376.60 | 3.16 | 5.48 | 22.89 | 12.37 | 1062.86 |
| 79 Property(39) | 1717.54 | +0.4 | 1711.19 | 1698.74 | 1736.86 | 1200.80 | 3.57 | 3.26 | 40.70 | 2.80 | 958.68 |
| 80 INVESTMENT TRUSTS(119) | 2836.63 | +0.3 | 2826.52 | 2812.41 | 2847.53 | 2256.20 | 2.18 | 1.75 | 57.24 | 14.80 | 975.44 |
| 89 FT-SE-A ALL-SHARE(852) | 1646.57 | +0.8 | 1632.78 | 1615.12 | 1635.49 | 1424.79 | 3.51 | 5.43 | 22.50 | 10.13 | 1266.47 |

■ **Hourly movements**

| | Open | 9.00 | 10.00 | 11.00 | 12.00 | 13.00 | 14.00 | 15.00 | 16.10 | High/day | Low/day |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FT-SE 100 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| FT-SE Mid 250 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| FT-SE-A 350 | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |

Time of FT-SE 100 High 3.27pm Low 8.31am

■ **FT-SE Actuaries 350 Industry baskets**

| | Open | 9.00 | 10.00 | 11.00 | 12.00 | 13.00 | 14.00 | 15.00 | 16.10 | Close | Previous | Change |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bldg & Cnstrcn | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| Pharmaceutcls | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| Water | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |
| Banks | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] | [illegible] |

[illegible]

## TRADING VOLUME

■ **Major Stocks yesterday**

| | Vol. 000s | Closing price | Day's change |
|---|---|---|---|
| ASDA Group† | 8,800 | 60½ | +1 |
| Abbey National† | 2,600 | 490 | +2 |
| Albert Fisher | 968 | 83 | +2 |
| Allied-Lyons† | 602 | 629 | +2 |
| Anglian Water† | 840 | 522 | +7 |
| Argos | 386 | 380 | +4 |
| Argyll Group† | 4,200 | 254 | +3 |
| [illegible] | [illegible] | [illegible] | [illegible] |

## LONDON EQUITIES

### LIFFE EQUITY OPTIONS

[illegible]

### FT GOLD MINES INDEX

[illegible]

### RISES AND FALLS YESTERDAY

| | Rises | Falls | Same |
|---|---|---|---|
| British Funds | 61 | 6 | 7 |
| Other Fixed Interest | 4 | 10 | 1 |
| Mineral Extraction | 91 | 45 | 69 |
| General Manufactures | 171 | 112 | 398 |
| Consumer Goods | 42 | 35 | 116 |
| Services | 117 | 79 | 323 |
| Utilities | 28 | 8 | 10 |
| Financials | 131 | 83 | 177 |
| Investment Trusts | 129 | 35 | 296 |
| Others | 61 | 40 | 26 |
| Totals | 835 | 453 | 1423 |

Data based on those companies listed on the London Share Service.

### TRADITIONAL OPTIONS

| | | | |
|---|---|---|---|
| First Dealings | March 7 | Last Declarations | June 16 |
| Last Dealings | March 18 | For settlement | June 27 |

Calls: Aminex, Avesco, Cannon St, Caverdale, Edmond Hldgs, Eurotunnel Uts, Lasmo, LBMS, Regalian, Renison Gold. Puts: Eurotunnel Uts. Puts & Calls: Cannon St, Lasmo, LBMS, Tullow Oil.

### LONDON RECENT ISSUES: EQUITIES

| Issue price p | Amt paid up | Mkt. cap (£m) | 1993/94 High | 1993/94 Low | Stock | Close price p | +/- | Net div. | Div. cov. | Grs yld | P/E net |
|---|---|---|---|---|---|---|---|---|---|---|---|
| [illegible] | | | | | | | | | | | |
| 100 | F.P. | 57.0 | 98 | 94 | Saracen Value | 95 | | - | - | - | - |
| - | F.P. | 4.56 | 43 | 38 | Do Warrants | 38 | | - | - | - | - |
| - | F.P. | 589.3 | 508 | 491 | Schroder UK Gwth | 503 | +5 | - | - | - | - |
| 200 | F.P. | 32.9 | 216 | 206 | Tribal | 208 | | R5.6 | 2.2 | 3.4 | 17.1 |
| 118 | F.P. | 54.8 | 140 | 128 | Tring Intl | 129 | | RN3.8 | 2.1 | 3.7 | 15.3 |
| 153 | F.P. | 53.9 | 160 | 153 | United Carriers | 159 | | - | - | - | - |

† Introduction. § Placing price. F.P. Fully-paid security. For an explanation of other notes, please refer to the Guide to the London Share Service

### RIGHTS OFFERS

| Issue price p | Amount paid up | Latest Renun. date | 1993/94 High | 1993/94 Low | Stock | Closing price p | +or- |
|---|---|---|---|---|---|---|---|
| 92 | Nil | 11/4 | 15pm | 10pm | Burford | 10pm | -2 |
| 173 | Nil | 5/4 | 27pm | 16pm | ¶Cap. & Regional | 16pm | -1 |
| 4¼ | Nil | 14/4 | 8pm | 3pm | Care UK | 4½pm | +½ |
| 42 | Nil | 14/4 | 18pm | 4pm | Conrad Ritblat | 4pm | |
| 15 | Nil | 25/3 | 4pm | 2½pm | Creston Land | 2½pm | -½ |
| 12 | Nil | 13/4 | 13pm | 10pm | Firth (GM) | 11pm | -½ |
| 120 | Nil | 21/3 | 45pm | 33pm | ¶Grosvenor Invs | 35pm | |
| 315 | Nil | 30/3 | 64pm | 52pm | Wetherspoon JD | 52pm | |

pm Price at a premium.

### FINANCIAL TIMES EQUITY INDICES

| | Mar 15 | Mar 14 | Mar 11 | Mar 10 | Mar 9 | Yr ago | *High | *Low |
|---|---|---|---|---|---|---|---|---|
| Ordinary Share | 2569.3 | 2546.2 | 2519.7 | 2547.2 | 2559.0 | 2273.3 | 2713.6 | 2124.7 |
| Ord. div. yield | 3.61 | 3.64 | 3.66 | 3.63 | 3.62 | 4.32 | 4.52 | 3.43 |
| Earn. yld. % full | 4.91 | 4.95 | 4.87 | 4.82 | 4.81 | 6.07 | 6.38 | 3.82 |
| P/E ratio net | 22.11 | 21.95 | 22.16 | 22.39 | 22.43 | 20.53 | 33.43 | 19.40 |
| P/E ratio nil | 23.09 | 22.92 | 23.23 | 23.47 | 23.51 | 18.97 | 30.80 | 18.14 |

*For 1993/94. Ordinary Share index since compilation: high 2713.6 2/02/94; low 49.4 26/6/40
FT Ordinary Share index base date 1/7/35.

Ordinary Share hourly changes

| Open | 9.00 | 10.00 | 11.00 | 12.00 | 13.00 | 14.00 | 15.00 | 16.00 | High | Low |
|---|---|---|---|---|---|---|---|---|---|---|
| 2546.2 | 2554.1 | 2555.5 | 2556.7 | 2558.5 | 2559.6 | 2562.8 | 2564.8 | 2569.2 | 2572.0 | 2546.2 |

| | Mar 15 | Mar 14 | Mar 11 | Mar 10 | Mar 9 | Yr ago |
|---|---|---|---|---|---|---|
| SEAQ bargains | 33,617 | 34,173 | 41,081 | 34,943 | 31,485 | 32,183 |
| Equity turnover (£m)† | - | 1248.0 | 1672.8 | 2118.1 | 1650.7 | 1301.2 |
| Equity bargains† | - | 38,169 | 45,620 | 38,825 | 35,793 | 37,334 |
| Shares traded (ml)† | - | 467.9 | 713.9 | 760.3 | 606.4 | 508.1 |

† Excluding intra-market business and overseas turnover.

## LONDON SHARE SERVICE

### BANKS

| | Notes | Price | + or - | 1993/94 high | low | Mkt Cap£m | Yld Gr's | P/E |
|---|---|---|---|---|---|---|---|---|
| ABN Amro Fl | | £24½ | +¼ | £25¼ | £18¼ | 6,774 | 4.6 | ϕ |
| ANZ A$ | | 254½ | — | 278¼ | 130 | 3,329 | 3.8 | 20.0 |
| Abbey National | gN□ | 480xd | +2 | 524 | 345 | 6,423 | 3.6 | 18.5 |
| Allied Irish I£ | ♣□ | 285xd | — | 314 | 179 | 1,746 | 4.7 | ϕ |
| Anglo Irish I£ | MN□ | 60 | — | *70 | 28 | 146.4 | 7.2 | 11.0 |
| Asahi Y | | 804¼ | -17½ | 844 | 415 | 16,124 | 0.7 | — |
| Banco Bil Viz Pta | | £16⅜ | +⅛ | £17⅞ | £13⅞ | 3,880 | 5.3 | 7.0 |
| Banco Sant Pta | | £34⅝ | — | £36 | £24¼ | 3,847 | 3.9 | 13.2 |
| Bank Leumi (UK) | | 430xd | — | 450 | 325 | 26.2 | 5.9 | ϕ |
| Bk Ireland I£ | ♣uz□ | 284 | — | *319 | 177 | 1,244 | 4.7 | 19.5 |
| Bank Scotland | ♣†□ | 197 | +2 | 247 | 116½ | 2,289 | 3.9 | 26.8 |
| 9¼pc Pf | | 132½ | +1¼ | 141½ | 117¼ | 132.5 | 8.7 | — |
| 9¾pc Pf | | 138¼ | +1¼ | 148½ | 123½ | 138.2 | 8.8 | — |
| Barclays | gN□ | 556xd | +22 | 662 | 362 | 9,013 | 3.4 | 28.3 |
| Dai Ichi Kan Y | | £12½ | +⅛ | £16⅝ | £9¹⁄₁₆ | 38,629 | 0.4 | 68.5 |
| Deutsche DM | | £324¼ | +2⅛ | £348⅞ | £250½ | 15,464 | 1.9 | — |
| Espirito Santo | | £23⅛ | +⅛ | £26⅞ | £16½ | 247.4 | 3.5 | 5.6 |
| First Nat Fin | N□ | 82 | — | *95 | 45 | 135.9 | 2.3 | — |
| 6.3pc Cv Pf | | 86 | — | *91 | 56 | 5.76 | 9.2 | — |
| 7pc Cv Pf | | 161 | — | 171 | 108 | 76.4 | 5.4 | — |
| Fuji Bank Y | | 1427½ | -19¾ | 1651 | 876 | 41,232 | 0.4 | — |
| HSBC HK | □ | 878xd | +4 | 1130 | 474 | 16,417 | 3.3 | ϕ |
| HSBC (75p Shs) | □ | 858xd | +6 | 1113 | 490 | 7,258 | 3.4 | ϕ |
| Lloyds | N□ | 599xd | +18 | 690 | 492 | 7,697 | 4.6 | 12.6 |
| Mitsubishi Y | | £16½ | +⅛ | £18¼ | £11⅛ | 51,929 | 0.3 | — |
| Mits Tst & Bk Y | | 994¼ | +9 | 1027¼ | 462½ | 12,954 | 0.5 | 16.0 |
| Mitsui Tst & Bk Y | | 777 | -8¼ | 892 | 374 | 8,308 | 0.7 | 28.5 |
| Nat Aust A$ | | 575 | —¼ | 620¼ | 322 | 7,560 | 4.1 | 14.0 |
| NatWest | gN□ | 497xd | +12 | 634 | 398 | 8,280 | 4.7 | 13.7 |
| Ottomane FFr | | £31½ | +¼ | £33 | £23¼ | 157.5 | 4.8 | 9.2 |
| Ryl Bk Scotland | ♣N□ | 408 | -2 | 528 | 207 | 3,470 | 3.2 | 18.7 |
| Sakura Y | | £9⅝ | +⅛ | £11 | £5¼ | 29,108 | 0.6 | 54.8 |
| Sanwa Y | | £13⅝ | -⅛ | £16 | £7¼ | 40,365 | 0.4 | — |
| Standard Chartd | gN□ | 1082xd | -17 | 1437 | 576 | 2,820 | 2.7 | 10.7 |
| 7.30pc Pf | | [illegible] | +1¼ | 108½ | 94 | 99.0 | 9.4 | — |

### BREWERIES

### BUILDING & CONSTRUCTION

### BUILDING MATS. & MERCHANTS

### BUILDING MATS. & MERCHANTS - Cont.

### CHEMICALS

### DISTRIBUTORS

### DIVERSIFIED INDUSTRIALS

### ELECTRICITY

### ELECTRONIC & ELECTRICAL EQPT

### ELECTRONIC & ELECTRICAL EQPT - Cont.

### ENGINEERING

### ENGINEERING, VEHICLES

### ENGINEERING, VEHICLES - Cont.

### EXTRACTIVE INDUSTRIES

### FOOD MANUFACTURERS

### GAS DISTRIBUTION

### HEALTH CARE

### HEALTH CARE - Cont.

### HOUSEHOLD GOODS

### INSURANCE

### INVESTMENT TRUSTS

### INVESTMENT TRUSTS - Cont.

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## INVESTMENT TRUSTS - Cont.

## LEISURE & HOTELS - Cont.

## OIL, INTEGRATED - Cont.

## PROPERTY - Cont.

## SPIRITS, WINES & CIDERS

## TRANSPORT - Cont.

## OTHER FINANCIAL

## SUPPORT SERVICES

## WATER

## LIFE ASSURANCE

## AMERICANS

## MEDIA

## OTHER SERVICES & BUSINESSES

## CANADIANS

## TELECOMMUNICATIONS

## TEXTILES & APPAREL

## INVESTMENT COMPANIES

Net asset values supplied by NatWest Securities Limited as a guide only. See guide to London Share Service

## RETAILERS, FOOD

## PHARMACEUTICALS

## MERCHANT BANKS

## OIL EXPLORATION & PRODUCTION

## PRINTING, PAPER & PACKAGING

## RETAILERS, GENERAL

## TOBACCO

## LEISURE & HOTELS

## TRANSPORT

## OIL, INTEGRATED

## PROPERTY

## SOUTH AFRICANS

| | Notes | Price | + or - | 1993/94 high | low | Mkt Cap£m | Yld Gr's | P/E |
|---|---|---|---|---|---|---|---|---|
| Anglo Am Ind | | £23½ | +¾ | £23½ | £7½ | 1,404 | 3.1 | ɸ |
| Barlow | | £4⅞ | +⅛ | £5⅜ | £3⅝ | 871.3 | 7.4 | 8.1 |
| Gold Fields SA R | | £14⅝ | +⅛ | £18 | £7¼ | 1,405 | 2.7 | 24.5 |
| NK Props | s | 90 | — | 97 | 68 | 3.82 | 9.9 | 37.0 |
| SASOL | ♥ | 353 | +17 | 381 | 215 | 1,899 | 4.4 | – |
| SA Brews | | £13⅜ | +⅜ | £15⅛ | £7⅞ | 7,340 | 2.0 | 22.4 |
| Tiger Oats | | 800 | -13 | 838 | 513 | 1,201 | 2.0 | 16.9 |
| Tongaat-Hulett | † | 570 | +2 | 583 | 212 | 426.6 | 2.6 | 15.9 |

## GUIDE TO LONDON SHARE SERVICE

Prices for the London Share Service delivered by Extel Financial, a member of the Financial Times Group.

Company classifications are based on those used for the FT-SE Actuaries Share Indices.

Closing mid-prices are shown in pence unless otherwise stated. Highs and lows are based on intra-day mid- prices.

Where stocks are denominated in currencies other than sterling, this is indicated after the name.

Symbols referring to dividend status appear in the notes column daily as a guide to yields and P/E ratios. Dividends and Dividend covers are published on Monday.

Market capitalisation shown is calculated separately for each line of stock quoted.

Estimated price/earnings ratios are based on latest annual reports and accounts and, where possible, are updated on interim figures. P/Es are calculated on "net" distribution basis, earnings per share being computed on profit after taxation, excluding exceptional profits/losses and unrelieved ACT where applicable. Yields are based on mid-prices, are gross, adjusted for a dividend tax credit of 20 per cent and allow for value of declared distribution and rights.

Estimated Net Asset Values (NAVs) are shown for Investment Trusts, in pence per share, along with the percentage discounts (Dis) or premiums (Pm -) to the current closing share price. The NAV basis assumes prior charges at par value, convertibles converted and warrants exercised if dilution occurs.

- □ Indicates the most actively traded stocks. This includes UK stocks where transactions and prices are published continuously through the Stock Exchange Automated Quotation system (SEAQ) and non-UK stocks through the SEAQ International system.
- * Highs and lows marked thus have been adjusted to allow for rights issues for cash
- † Interim since increased or resumed
- ‡ Interim since reduced, passed or deferred
- ♣ Figures or report awaited
- ♥ Not officially UK listed; dealings permitted under rule 535(4)(a)
- ♣ Free annual/interim report available, see details below.
- ✣ USM; not listed on Stock Exchange and company not subjected to same degree of regulation as listed securities.
- †† Not officially UK listed; dealings permitted under Rule 535(2)
- # Price at time of suspension
- ¶ Indicated dividend yield after pending scrip and/or rights issue.
- ♦ Merger bid or reorganisation in progress
- § Forecast dividend yield; p/e based on earnings updated by latest interim statement.
- ɸ Unregulated collective investment scheme.

a Yield based on annualised dividend
b Figures based on prospectus or other official estimates.
c Cents.
f Flat yield.
g Assumed dividend yield after rights issue.
h Assumed dividend yield after scrip issue.
n Rights issue pending
q Earnings based on preliminary figures.
s Dividend yield excludes a special payment.
t Indicated dividend yield, p/e ratio based on latest annual earnings.
u Forecast, or estimated annualised dividend yield, p/e based on previous year's earnings
v Not subject to ACT.
z Dividend yield includes a special payment
F Yield based on prospectus or other official estimates for 1994-95.
G Assumed yield after pending scrip and/or rights issue.
H Yield based on prospectus or other official estimates for 1993.
K Yield based on prospectus or other official estimates for 1994
L Estimated annualised yield, p/e based on latest annual earnings.
M Yield based on prospectus or other official estimates for 1993-94.
N Figures based on IMR 'Headline Earnings'
P Figures based on prospectus or other official estimates for 1994.
R Forecast annualised yield, p/e based on prospectus or other official estimates.
T Figures assumed.
W Pro forma figures.
Z Dividend yield to date.

Abbreviations: xd ex dividend; xc ex scrip issue; xr ex rights; xa ex all; xf ex capital distribution.

This service is available to companies whose shares are regularly traded in the United Kingdom for a fee of £1235 a year for each security shown, subject to the Editor's discretion

# FT MANAGED FUNDS SERVICE

● FT Cityline Unit Trust Prices are available over the telephone. Call the FT Cityline Help Desk on (071) 873 4378 for more details.

# AUTHORISED UNIT TRUSTS

### AIB Unit Trust Managers Limited (1000)F
51 Belmont Rd, Uxbridge, Middx UB8 1RZ 0895 259783

| | Init Chrge | Canc Price | Bid Price | Offer Price | + or - | Yield Gr's |
|---|---|---|---|---|---|---|
| AIB Grofund American | 5 | 166.5 | 168.0 | 178.8 | -0.90 | 0.00 |
| AIB Grofund Equity | 5 | 240.8 | 243.4 | 257.8 | +1.90 | 1.46 |
| AIB Grofund Euro | 5 | 302.4 | 303.9 | 314.7 | +1.70 | 0.00 |
| AIB Grofund Excl Balanced | 3 | 116.1 | 117.5 | 121.6 | -1.80 | 1.93 |
| AIB Grofund Gilt | 3 | 79.59 | 79.61 | 81.04 | -0.04 | 4.24 |
| AIB Grofund Japan | 5 | 185.4 | 187.1 | 198.0 | -0.60 | 0.00 |

### AXA Equity & Law Unit Tst Mngrs (1200)H
Equity & Law Hse, Corpn St, Coventry 0203 553231

| | Init Chrge | Canc Price | Bid Price | Offer Price | + or - | Yield Gr's |
|---|---|---|---|---|---|---|
| General Inc | 5 | 478.3 | 479.9xd | 510.6 | -3.1 | 2.20 |
| General Acc | 5 | 535.2 | 537.0xd | 571.3 | -3.4 | 2.20 |
| UK Growth Acc | 5 | 359.0 | 363.7 | 387.0 | -2.3 | 2.38 |
| UK Growth Inc | 5 | 251.4 | 254.6 | 270.9 | -1.5 | 2.38 |
| Higher Inc Acc | 5 | 661.5 | 670.5 | 713.4 | -4.6 | 3.30 |
| Higher Inc Inc | 5 | 395.7 | 401.0 | 426.7 | -2.7 | 3.30 |
| Gilts/Fxd Int Acc | 5½ | 188.8 | 188.6xd | 199.2 | -0.2 | 5.01 |
| Gilts/Fxd Int Inc | 5½ | 94.29 | 94.23xd | 99.51 | -0.09 | 5.01 |
| Nth America | 5 | 353.6 | 380.0 | 376.7 | +1.4 | 0.00 |
| Far East | 5 | 382.8 | 382.8 | 398.0 | -0.4 | 0.00 |
| Europe | 5 | 274.1 | 276.3xd | 294.0 | +0.4 | 0.35 |
| Far Eastern | 5 | 72.30 | 72.20 | 76.81 | +0.36 | 2.50 |

### Capel-Cure Myers UT Mngt Ltd - Contd.

| | Init Chrge | Canc Price | Bid Price | Offer Price | + or - | Yield Gr's |
|---|---|---|---|---|---|---|
| Exempt Fund | | | | | | |
| High Yield | 2 | 1388.00 | 1392.00 | 1450.00 | +4.00 | 3.92 |
| (Accum Units) | 2 | 1635.00 | 1640.00 | 1690.00 | +4.00 | 3.92 |

### Capital House Unit Tst Mgrs (1200)F
Capital House, Festival Square, Edinburgh. 031-228 4477 Dealing 0800 800541

| | Init Chrge | Canc Price | Bid Price | Offer Price | + or - | Yield Gr's |
|---|---|---|---|---|---|---|
| American Gwth Tst Inc | 6 | 37.58 | 37.91 | 40.64 | -0.21 | 0.21 |
| American Gwth Tst Acc | 6 | 37.80 | 38.13 | 40.78 | -0.21 | 0.21 |
| Cash Acc | 0 | 61.67 | 61.67 | 61.67 | — | 4.94 |
| Do Income | 0 | 50.61 | 50.61 | 50.61 | — | 4.94 |
| European Gwth | 6 | 40.74 | 40.24 | 42.91 | +0.2 | 0.35 |
| Income & Gwth Acc | 6 | 31.80 | 31.84 | 34.05 | -0.09 | 3.94 |
| Do Income | 6 | 29.18 | 29.40 | 31.44 | -0.08 | 3.94 |
| Intnl Gwth | 6 | 32.29 | 32.29 | 34.59 | +0.04 | 0.52 |
| Japan Gwth | 6 | 28.75 | 28.78 | 30.74 | -0.08 | — |
| Managed Tst Acc | 6 | 61.75 | 61.75 | 65.34 | -0.03 | 1.49 |
| Do Income | 6 | 60.23 | 60.23 | 63.72 | -0.02 | 1.49 |
| Oriental Opps Acc | 6 | 148.5 | 148.6 | 158.8 | -0.8 | — |
| Do Income | 6 | 144.5 | 144.5 | 154.5 | -0.8 | — |
| Property Shares | 6 | 45.18 | 46.75 | 50.89 | -0.08 | 1.63 |
| Smaller Cos | 6 | 33.20 | 33.20 | 35.50 | -0.01 | 1.49 |
| UK Growth Tst | 6 | 28.58 | 28.76 | 29.82 | +0.13 | 2.65 |
| Royal Scottish Assurance | | | | | | |
| Roy ScotCap Hse Global Acc | 6 | 78.33 | 78.71xd | 84.18 | -0.41 | 1.63 |
| Do Income | 6 | 73.26 | 73.60xd | 78.74 | -0.38 | 1.63 |
| Roy ScotCap Hse UK Acc | 6 | 73.42 | 73.82 | 78.95 | -0.46 | 2.33 |
| Do Income | 6 | 68.19 | 68.63 | 73.29 | -0.42 | 2.33 |

### Pilgrim Unit Trust Mngmt Ltd (0830)F
30 Pilgrim Street, Newcastle upon Tyne NE1 6RQ
Administration & Dealing:
Unit Trust Accounting & Management Ltd
1 White Hart Yard, London SE1 1NX 071-407 5966

| | Init Chrge | Canc Price | Bid Price | Offer Price | + or - | Yield Gr's |
|---|---|---|---|---|---|---|
| American | 6 | 107.97 | 108.78 | 115.70 | +4.14 | — |
| European | 6 | 70.86 | 71.24 | 75.78 | +0.46 | 0.00 |
| Global | 6 | 69.97 | 70.26 | 74.73 | +0.12 | — |
| Pacific | 6 | 69.76 | 69.8 | 74.26 | +0.47 | 0.05 |
| UK Income & Growth | 6 | 68.15 | 67.74 | 72.08 | -0.04 | 1.89 |
| UK Inc & Gwth Acc | 6 | 71.43 | 73.15 | 77.82 | +0.04 | 1.84 |

## Guide to pricing of Authorised Unit Trusts

Compiled with the assistance of Lautro §§

**INITIAL CHARGE:** Charge made on sale of units. Used to defray marketing and administrative costs, including commission paid to intermediaries. This charge is included in the price of units.

**OFFER PRICE:** Also called issue price. The price at which units are bought by investors.

**BID PRICE:** Also called redemption price. The price at which units are sold back by investors.

**CANCELLATION PRICE:** The minimum redemption price. The maximum spread between the offer and bid prices is determined by a formula laid down by the government. In practice, most unit trust managers quote a much narrower spread. As a result, the bid price is often set above the cancellation price. However, the bid price might be moved to the cancellation price by the managers at any time, usually in circumstances in which there is a large excess of sellers of units over buyers.

**TIME:** The time shown alongside the fund manager's name is the time of the unit trust's valuation point unless another time is indicated by the symbol alongside the individual unit trust name. The symbols are as follows: (♥) - 0001 to 1100 hours; (♦) - 1101 to 1400 hours; (♠) - 1401 to 1700 hours; (♣) - 1701 to midnight. Daily dealing prices are set on the basis of the valuation point; a short period of time may elapse before prices become available.

**HISTORIC PRICING:** The letter H denotes that the managers will normally deal on the price set on the most recent valuation. The prices shown are the latest available before publication and may not be the current dealing levels because of an intervening portfolio revaluation or a switch to a forward pricing basis. The managers must deal at a forward price on request, and may move to forward pricing at any time.

**FORWARD PRICING:** The letter F denotes that the managers deal at the price to be set on the next valuation. Investors can be given no definite price in advance of the purchase or sale being carried out. The prices appearing in the newspaper are the most recent provided by the managers.

**SCHEME PARTICULARS AND REPORTS:** The most recent report and scheme particulars can be obtained free of charge from fund managers.

Other explanatory notes are contained in the last column of the FT Managed Funds Service.

§§ Life Assurance and Unit Trust Regulatory Organisation, Centre Point, 103 New Oxford Street, London WC1A 1QH Tel: 071-379-0444.

# FT MANAGED FUNDS SERVICE

● FT Cityline Unit Trust Prices are available over the telephone. Call the FT Cityline Help Desk on (071) 873 4378 for more details.

| | Init Charge | Canc Price | Bid Price | Offer Price | + or - | Yield Grs |
|---|---|---|---|---|---|---|
| **T.U. Fund Managers Limited (1200)H** | | | | | | |
| NLA Tower, Addiscombe Road, Croydon 081-686 4355 | | | | | | |
| T.U. British | 5 | 341.8 | 347.30 | 369.0 | +2.4 | 2.44 |
| T.U. European | | 54.43 | 54.73 | 57.30 | -0.16 | 2.00 |
| **Templeton Unit Trust Managers Ltd (1200)F** | | | | | | |
| 20 Castle Terrace, Edinburgh EH1 2EH 031-469 4000 | | | | | | |
| Global Growth Acc. | 6 | [illegible] | 270.54 | 244.48 | +1.18 | 1.40 |
| Global Growth Inc. | 6 | [illegible] | 207.[illegible] | 221.81 | +1.47 | 1.40 |
| Global Balanced Acc. | 6 | 202.50 | 202.73 | 218.[illegible] | -0.84 | 2.50 |
| Global Balanced Inc. | 6 | 176.87 | 177.07 | 18[illegible] | -0.77 | 2.50 |
| Value Tst Acc. | 6 | [illegible] | 137.53 | 147.[illegible] | +0.89 | 1.35 |
| Value Tst Inc. | 6 | 125.[illegible] | 126.04 | 134.65 | +0.87 | 1.35 |
| **Thornton Unit Managers Ltd (1200)F** | | | | | | |
| 33 Cannon Street, London EC4R 1AP 071-246 3000 | | | | | | |
| Dealing 071-248 3001 | | | | | | |
| American Smlr Cos | 5 | 70.13 | 70.19 | 74.80 | +0.48 | 0.00 |
| (Accum Units) | 5 | 72.34 | 72.34 | 77.16 | +0.49 | 0.00 |
| Dresdner Europe Gr. | 5 | 42.49 | 42.49 | 44.84 | +0.82 | 0.40 |
| (Accum Units) | 5 | 81.44 | 81.44 | 84.57 | +0.04 | 0.40 |
| European | 5 | 282.44 | 282.44 | 298.34 | +1.09 | 0.85 |
| (Accum Units) | 5 | 283.32 | 284.32 | 300.77 | +1.09 | 0.85 |
| Extrapl | 2½ | 553.84 | 553.84 | 578.17 | +4.29 | 3.31 |
| (Accum Units) | 2½ | 1795.48 | 1795.48 | 1873.48 | +13.99 | 3.31 |
| Iberian Growth | 5½ | 50.67 | 50.67 | 53.00 | +0.15 | 0.02 |
| Intl Growth | 5 | 111.48 | 111.48 | 118.78 | +0.88 | 0.58 |
| (Accum Units) | 5 | 121.12 | 121.12 | 129.05 | +0.06 | 0.58 |
| Japan Tst | 5 | 92.65 | 92.65 | 98.82 | — | 0.00 |
| (Accum Units) | 5 | 92.65 | 92.65 | 98.82 | — | 0.00 |
| Little Dragons | 5 | 102.96 | 102.96 | 109.82 | -0.53 | 0.42 |
| (Accum Units) | 5 | 105.96 | 105.96 | 113.04 | -0.58 | 0.42 |
| Nth Amer Grwth | 5 | 234.96 | 233.96 | 249.88 | +1.81 | 0.63 |
| (Accum Units) | 5 | 290.56 | 290.56 | 309.18 | +2.37 | 0.63 |
| Oriental Income | 5 | 49.72 | 49.72 | 53.00 | -0.17 | 4.87 |
| (Accum Units) | 5 | 65.40 | 65.40 | 69.78 | -0.22 | 4.87 |
| Preference | 3½ | 123.73 | 123.73 | 130.01 | +0.00 | 7.91 |
| (Accum Units) | 3½ | 629.40 | 629.40 | 659.57 | +0.16 | 7.91 |
| Tiger | 5 | 288.63 | 288.63 | 307.87 | -0.70 | 0.52 |
| (Accum Units) | 5 | 303.23 | 303.23 | 323.44 | -0.76 | 0.52 |
| Uk Blue Chip | 5 | 65.40 | 65.40 | 69.97 | +0.47 | 2.83 |
| (Accum Units) | 5 | 68.90 | 68.90 | 73.61 | +0.48 | 2.83 |
| UK Growth | 5½ | 534.90 | 534.90 | 569.94 | +2.95 | 2.08 |
| (Accum Units) | 5½ | 1184.53 | 1184.53 | 1261.14 | +6.54 | 2.08 |
| Uk High Yield | 5½ | 110.51 | 110.51 | 117.58 | +0.68 | 3.25 |
| (Accum Units) | 5½ | 344.68 | 344.68 | 366.65 | +2.11 | 3.25 |
| Uk Recovery | 5½ | 284.82 | 284.82 | 300.88 | +0.84 | 1.70 |
| (Accum Units) | 5½ | 519.13 | 519.13 | 552.27 | +1.51 | 1.70 |
| UK Smlr Cos | 5 | 106.90 | 110.76 | 117.32 | +0.21 | 1.71 |
| (Accum Units) | 5 | 125.71 | 129.66 | 138.67 | +0.25 | 1.71 |
| Uk Smaller Cos Div | 5½ | 108.56 | 108.56 | 116.65 | — | 4.17 |
| (Accum Units) | 5½ | 183.28 | 183.28 | 194.85 | -0.01 | 4.17 |
| **Waverley Unit Tst Mngmt Ltd (1000)F** | | | | | | |
| 13 Charlotte Sq, Edinburgh 031-225 1551 | | | | | | |

| | Bid Price | Offer Price | + or - | Yield Gross |
|---|---|---|---|---|
| **Abbey Life Assurance Co Ltd** | | | | |
| 80 Holdenhurst Road, Bournemouth 0202 292373 | | | | |
| Prop. Ser. 1 | 275.8 | 290.4 | — | — |
| Equity Ser. 1 | 178.3 | 188.0 | +1.70 | — |
| Prop. Acc. Ser 2 | 503.7 | 530.3 | | — |
| Equity Ser 2 | 228.8 | 240.0 | -2.30 | — |
| Selective Acc. Ser 2 | 488.4 | 514.2 | +1.30 | — |
| Prop. Ser. 4 | 392.2 | 412.9 | — | — |
| Equity Ser. 4 | 217.8 | 229.3 | +1.60 | — |
| Man. Ser. 4 | 680.2 | 718.1 | +2.70 | — |
| Fixed Int. Ser. 4 | 347.8 | 366.2 | -0.30 | — |
| Indexed Inv. Ser. 4 | 211.8 | 223.0 | -0.20 | 0 |
| American Ser. 4 | 520.3 | 547.7 | +2.20 | — |
| Japan Ser 4 | 379.7 | 399.7 | +0.70 | — |
| European Ser 4 | 169.1 | 178.0 | +1.00 | — |
| High Inc. Ser. 4 | 680.0 | 715.8 | +3.70 | — |
| Money Ser. 4 | 321.2 | 338.2 | +0.20 | 0.0 |
| Intl Ser. 4 | 195.5 | 205.8 | +1.10 | — |
| Convertible Ser. 4 | 173.0 | 182.2 | +0.90 | 0 |
| Asian Pacific | 215.1 | 226.6 | -0.80 | — |
| Ethical | 140.8 | 148.3 | +0.30 | 0 |
| Protected Growth | 109.3 | 115.1 | +0.10 | — |
| **Pension Funds** | | | | |
| Property | 762.7 | 802.9 | — | — |
| Equity | 1739.6 | 1831.1 | +18.10 | — |
| Selective | 566.7 | 585.0 | +2.10 | — |
| Managed | 1467.4 | 1544.7 | +3.20 | — |
| Security | 701.4 | 738.4 | +0.60 | — |
| Fixed Int. | 445.7 | 469.2 | -0.20 | — |
| Indexed | 239.3 | 251.9 | -0.10 | — |
| American | 495.8 | 521.7 | +2.50 | — |
| Japan | 432.5 | 455.3 | +1.00 | — |
| European | 264.3 | 278.3 | +2.00 | — |
| High Income | 208.5 | 219.5 | +1.40 | 0 |
| Ethical | 213.4 | 224.7 | +0.80 | 0 |
| International | 388.2 | 408.7 | +2.80 | 0 |
| Protected Growth | 123.5 | 130.1 | +0.10 | 0 |
| Asian Pacific | 91.2 | 96.1 | -0.20 | — |
| **Abbey National Life Plc** | | | | |
| 287 St Vincent Street, Glasgow 041 305 8000 | | | | |
| Managed | 116.8 | 123.0 | +0.9 | — |
| Uk Equity | 117.1 | 123.3 | +1.2 | — |
| International | 122.1 | 128.6 | +0.6 | — |
| Deposit | 100.7 | 105.4 | | — |
| Pension Managed | 119.2 | 125.5 | +1.0 | — |
| Pension Uk Equity | 118.5 | 124.8 | +1.5 | — |
| Pension International | 128.4 | 135.2 | +0.3 | — |
| Pension Deposit | 101.9 | 107.3 | — | — |
| **Acorna Life Assurance Ltd** | | | | |
| The County, Egham, Surrey TW2 9AT 0784 475333 | | | | |

## OTHER UK UNIT TRUSTS

## INSURANCES

# FT MANAGED FUNDS SERVICE

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| | Bid Price | Offer Price | + or - | Yield Gross |
|---|---|---|---|---|
| **S-E-Banken Life Assurance Co Ltd** | | | | |
| 149-151 High Rd, Chadwell Hth RM6 6PJ 081-597 7500 | | | | |
| Managed Fund | 157.7 | 166.1 | +0.8 | - |
| Pension Mngd Fd | 177.7 | 187.1 | +1.2 | - |
| **Save & Prosper Group (z)** | | | | |
| 16-22 Western Rd, Romford RM1 3LB 0708-766966 | | | | |
| Bal Inv Fd | 772.9 | 817.9 | +2.1 | 2.16 |
| Coverdale All Bond Fd | 162.3 | 177.6 | +0.2 | - |
| Deposit Fd† | 361.7 | 382.3 | - | 6.74 |
| Directors' Portfolio | 64.6 | 69.6 | +0.5 | - |
| Equity Pens Fd | 194.4 | 205.6 | +1.4 | - |
| European Mngd Fd | 68.0 | 73.0 | +0.3 | - |
| Gilt Fd | 521.1 | 551.8 | +0.2 | 8.05 |
| Gilt Pens Fd | 143.4 | 151.8 | +0.1 | 7.93 |
| Global Equity Fd | 245.2 | 258.5 | +0.9 | - |
| Global Eq Pens Fd | 243.1 | 257.3 | +0.9 | - |
| High Inc Pens Fd† | 132.7 | 140.5 | - | 5.46 |
| Japan/Asia Mngd Fd | 104.9 | 111.1 | +0.7 | - |
| Managed Income Fd | 50.1 | 53.1 | +0.2 | 8.13 |
| Man Pens Fd | 201.0 | 212.6 | +0.8 | 1.98 |
| North American Mngd Fd | 71.8 | 76.0 | +0.4 | - |
| Pacific Mngd Fd | 86.5 | 91.6 | +0.7 | - |
| Property Fd* | 101.5 | 107.5 | - | 5.92 |
| Prop Pens Fd* | 133.5 | 141.3 | - | 6.45 |
| Thornton Limited Managed | 234.4 | 248.1 | +0.5 | - |
| UK Capital Portfolio | 63.8 | 67.4 | +0.5 | - |
| UK Managed Gilt Fd | 61.6 | 65.2 | +0.2 | - |
| †Weekly dealings. *Fortnightly dealings | | | | |
| **Scottish Amicable** | | | | |
| 150 St Vincent St, Glasgow 041-248 2323 | | | | |
| Life Funds (First Series) | | | | |
| Managed | 474.8 | 499.6 | +0.20 | - |
| Equity | 591.9 | 623.1 | | - |
| Property | 287.4 | 302.6 | +0.20 | - |
| International | 479.7 | 505.0 | +0.40 | - |
| Japanese | 128.1 | 134.9 | +0.40 | - |
| Asia Pacific | 194.8 | 204.9 | -0.60 | - |

[illegible]

| | Bid Price | Offer Price | + or - | Yield Gross |
|---|---|---|---|---|
| **Skandia Life Assurance Co Ltd - Contd.** | | | | |
| Pension Managed Funds | | | | |
| Skandia Cautious | 159.1 | 167.4 | -0.6 | - |
| Skandia Balanced | 600.7 | 632.3 | -0.1 | - |
| Skandia Ethical Selection | 136.1 | 143.3 | -0.6 | - |
| Skandia Deposit | 449.9 | 473.5 | +0.1 | - |
| Abtrust Managed | 144.7 | 152.3 | +0.9 | - |
| Barings Managed | 165.7 | 174.4 | +0.7 | - |
| BZW Managed | 130.4 | 137.2 | -0.1 | - |
| CU Managed | 298.1 | 313.7 | +2.5 | - |
| Fidelity Managed | 242.4 | 255.1 | +0.9 | - |
| Fleming Managed Inv Tst | 161.2 | 169.6 | -0.4 | - |
| F & C Investment Trust | 212.4 | 223.5 | -1.5 | - |
| Framlington Managed | 375.0 | 394.7 | +1.0 | - |
| Gartmore Managed | 400.5 | 421.5 | +3.8 | - |
| Henderson Managed | 363.4 | 382.5 | +2.5 | - |
| Hill Samuel Managed | 304.1 | 320.1 | +0.5 | - |
| Invesco Managed | 286.1 | 301.1 | +2.2 | - |
| James Capel Core Mngd | 180.3 | 189.7 | +1.3 | - |
| Kleinwort Benson Mngd | 152.1 | 160.1 | +0.9 | - |
| Martin Currie Mngd | 170.9 | 180.3 | +0.1 | - |
| Morgan Grenfell Mngd | 184.6 | 194.5 | | - |
| Murray Johnstone Mngd | 167.5 | 176.1 | +0.1 | - |
| Perpetual Managed | 275.5 | 289.9 | +1.6 | - |
| Schroder Managed | 164.1 | 182.2 | +1.1 | - |
| **Standard Life Assurance Company** | | | | |
| 3 George St, Edinburgh EH2 2XZ 031-225 2552 | | | | |
| Managed | 714.8 | 752.5 | +2.2 | - |
| Equity | 1014.7 | 1068.2 | +4.6 | - |
| Fixed Interest | 402.1 | 423.3 | +0.2 | - |
| Index-Linked | 209.6 | 220.6 | +0.3 | - |
| International | 639.8 | 673.2 | +0.5 | - |
| North American | 146.7 | 154.5 | +0.6 | - |
| Far East | 179.2 | 188.7 | -0.9 | - |
| European | 175.1 | 184.4 | +0.9 | - |
| Property | 340.7 | 358.7 | | - |
| Cash | 263.1 | 277.0 | +0.1 | - |
| Pension Managed | 1005.1 | 1058.0 | +3.6 | - |
| Pension Stock Exchange | 227.2 | 239.2 | +0.8 | - |
| Pension Equity | 1464.9 | 1542.1 | +7.3 | - |

[illegible]

**Tunbridge Wells Equitable - Contd.**

[illegible]

## OFFSHORE INSURANCES

[illegible]

## MANAGEMENT SERVICES

[illegible]

## OFFSHORE AND OVERSEAS

## BERMUDA (SIB RECOGNISED)

[illegible]

## GUERNSEY (SIB RECOGNISED)

[illegible]

## IRELAND (SIB RECOGNISED)

[illegible]

## GUERNSEY (REGULATED)(**)

[illegible]

## IRELAND (REGULATED)(**)

[illegible]

## ISLE OF MAN (SIB RECOGNISED)

[illegible]

## ISLE OF MAN (REGULATED)(**)

[illegible]

## JERSEY (SIB RECOGNISED)

[illegible]

## JERSEY (REGULATED)(**)

[illegible]

هكذا من الاصل



# FT MANAGED FUNDS SERVICE

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## LUXEMBOURG (SIB RECOGNISED)

## LUXEMBOURG (REGULATED)(**)

## SWITZERLAND (SIB RECOGNISED)

## OTHER OFFSHORE FUNDS

### MANAGED FUNDS NOTES

## CURRENCIES AND MONEY

### MARKETS REPORT

# $ steady on mixed data

Economic data released in the US yesterday revealed hints of inflation, but had little impact on the dollar which has already factored in a further Fed tightening, *writes Philip Gawith.*

The US currency failed to make a sustained break through the key technical level of DM1.6975 and finished in London at DM1.6963, up from DM1.6898 on Monday.

Boosted by a fall in Japan's bilateral trade surplus with the US in February, the dollar also finished stronger against the yen, closing at Y106.150 from Y105.880.

In Europe the recovery from recent interest rate pessimism continued with both sterling and euromark futures rising across the the yield curve. Market speculation is that the Bundesbank will today announce a more generous cut in its repo rate than the 3 basis points of the last two weeks.

■ The dollar weakened initially after the release of fairly modest inflation data which appeared to postpone the need for higher US interest rates. Although the headline figure showed February producer prices up by 0.5 per cent, this figure fell to 0.1 per cent when the volatile food and energy sectors were excluded. Cold weather in February pushed fuel bills to exceptional levels.

The industrial production numbers released a little later, however, lent support to the US currency. February industrial production rose 0.4 per cent, against expectations of no change, while capacity use was 83.4 per cent against a 83 per cent forecast.

*Mr David Cocker, currency* analyst at Chemical Bank, said the capacity utilisation measure had caused concern. "We are almost at the level at which in the past we have seen inflation pressure build in the US."

Mr Neil MacKinnon, chief currency strategist at Citibank, endorsed this view, saying "inflation pressures are bubbling below the surface." He said there was nothing in the data to prevent the Fed from tightening if it wishes.

Mr Cocker said the muted response of the dollar was explained by the market already having factored in a rise in US interest rates.

Mr MacKinnon said the figures contained nothing new for dollar bulls. He predicted the US currency "will find it very difficult to make progress against the D-Mark from now on."

Japan's February trade figures offered some solace for dollar bulls, showing an unadjusted 0.9 per cent decline in the February surplus with the US from a year earlier.

This positive note was promptly offset by comments from Mr Mickey Kantor, the US trade representative, showing that the US would continue to play tough over the trade talks. "Our trade and economic relationship, a key priority of the Clinton administration, is in serious disrepair," he said.

■ *The D-Mark was mixed in* European trading ahead of today's repo announcement. It was unchanged in London *against the Belgian and French* francs, at BFr20.60 and FFr3.398 respectively. It was weaker against the Italian lira, at L985.4 from L988.1, and stronger against the Spanish peseta finishing at Pta82.02 from Pta81.94.

Increased optimism about the pace of monetary easing was evident in the euromark futures. The June contract firmed by 4 points to 94.60 and the December contract was 10 points firmer at 95.06.

Analysts said German call money, in the 5.85 - 5.90 range was also helping, in that it indicated the market could accept a 6-7 basis points cut without difficulty.

Call money is now below the repo rate, which is 5.94 per cent. The Bundesbank yesterday announced that it would be implementing another variable rate repo.

Some observers were more aggressive in their forecasts with Citibank's Mr MacKinnon saying he "would not be surprised" if the repo fell to 5.75 per cent. "The strength of the D-Mark gives the Bundesbank a chance to put through quite a handsome repo cut.

One factor likely to have a bearing on the size of the cut is the reportedly easy liquidity position of the banks, which may have encouraged lower bids.

■ Sterling showed little reaction to the CBI's distributive trades survey which showed a slow-down in retail sales growth. It finished slightly weaker against the dollar at $1.4915 from $1.4945, but was firmer against the D-Mark closing at DM2.53 from DM2.5254.

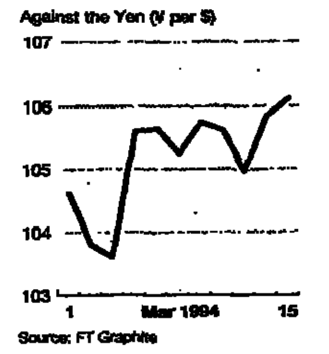
The CBI survey did have an impact in the futures market with the June sterling contract rising by six points to 94.90, and the December contract eight points higher at 94.60.

In the discount market the overnight rate maintained its firm tone of late, trading around 6 per cent. Mr Philip Shaw, group economist at Union Discount, said the Bank of England was continuing to have difficulty in clearing the *shortage. He said this reflected* a shortage of bills rather than pressure from the Bank.

Yesterday the Bank provided *the market with £550m late* assistance after earlier putting £658m liquidity into the system. This compared with a revised forecast of a £1.25bn shortage.

**Dollar**

Against the Yen (¥ per $)




Source: FT Graphite

■ **Pound in New York**

| Mar 15 | —Latest— | – Prev. close – |
|---|---|---|
| £ spot | 1.4915 | 1.4958 |
| 1 mth | 1.4893 | 1.4934 |
| 3 mth | 1.4867 | 1.4911 |
| 1 yr | 1.4817 | 1.4757 |

■ **OTHER CURRENCIES**

| Mar 15 | £ | $ |
|---|---|---|
| Hungary | 154.095 - 154.273 | 103.350 - 103.400 |
| Iran | 2612.00 - 2618.00 | 1748.00 - 1750.00 |
| Kuwait | 0.4436 - 0.4454 | 0.2975 - 0.2985 |
| Poland | 32715.5 - 32737.5 | 21942.0 - 21942.0 |
| Russia | 2564.75 - 2572.25 | 1707.00 - 1712.00 |
| U.A.E. | 5.4749 - 5.4881 | 3.6715 - 3.6735 |

## POUND SPOT FORWARD AGAINST THE POUND

| Mar 15 | | Closing mid-point | Change on day | Bid/offer spread | Day's Mid high | low | One month Rate | %PA | Three months Rate | %PA | One year Rate | %PA | Bank of Eng. Index |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Europe** | | | | | | | | | | | | | |
| Austria | (Sch) | 17.7973 | +0.0295 | 876 - 070 | 17.8391 | 17.6893 | 17.7935 | 0.3 | 17.7879 | 0.2 | - | - | 113.8 |
| Belgium | (BFr) | 52.1130 | +0.1014 | 657 - 603 | 52.2151 | 52.0281 | 52.163 | -1.2 | 52.258 | -1.1 | 52.503 | -0.7 | 114.7 |
| Denmark | (DKr) | 9.8756 | +0.0401 | 682 - 830 | 9.8936 | 9.8514 | 9.8846 | -1.1 | 9.8992 | -1.0 | 9.934 | -0.6 | 115.0 |
| Finland | (FM) | 8.2620 | +0.0488 | 518 - 722 | 8.2880 | 8.1890 | - | - | - | - | - | - | 81.3 |
| France | (FFr) | 8.5984 | +0.0185 | 947 - 021 | 8.6178 | 8.5799 | 8.6079 | -1.3 | 8.6236 | -1.2 | 8.6478 | -0.6 | 108.6 |
| Germany | (DM) | 2.5300 | +0.0046 | 287 - 312 | 2.5381 | 2.5255 | 2.532 | -0.9 | 2.535 | -0.8 | 2.5354 | -0.2 | 123.0 |
| Greece | (Dr) | 368.177 | +0.081 | 681 - 673 | 368.673 | 367.133 | - | - | - | - | - | - | - |
| Ireland | (I£) | 1.0399 | +0.0001 | 388 - 410 | 1.0426 | 1.0391 | 1.0407 | -1.0 | 1.0424 | -1.0 | 1.0482 | -0.8 | 102.8 |
| Italy | (L) | 2493.27 | -1.43 | 131 - 522 | 2499.98 | 2490.44 | 2500.47 | -3.5 | 2513.92 | -3.3 | 2565.57 | -2.9 | 75.9 |
| Luxembourg | (LFr) | 52.1130 | +0.1014 | 657 - 603 | 52.2151 | 52.0281 | 52.163 | -1.2 | 52.258 | -1.1 | 52.503 | -0.7 | 114.7 |
| Netherlands | (Fl) | 2.8421 | +0.0055 | 404 - 438 | 2.8484 | 2.8345 | 2.8427 | -0.3 | 2.8436 | -0.2 | 2.8405 | 0.1 | 118.3 |
| Norway | (NKr) | 10.9499 | +0.0225 | 447 - 550 | 11.0105 | 10.9098 | 10.9442 | 0.6 | 10.9568 | -0.3 | 10.9478 | 0.0 | 85.0 |
| Portugal | (Es) | 259.920 | +0.748 | 658 - 981 | 260.441 | 258.917 | 260.795 | -4.5 | 262.74 | -4.5 | - | - | - |
| Spain | (Pta) | 207.528 | +0.844 | 413 - 642 | 207.965 | 207.000 | 208.133 | -3.5 | 209.203 | -3.2 | 213.318 | -2.8 | 84.9 |
| Sweden | (SKr) | 11.7548 | +0.0163 | 452 - 643 | 11.8349 | 11.7071 | 11.7746 | -2.0 | 11.8103 | -1.9 | 11.9193 | -1.4 | 76.7 |
| Switzerland | (SFr) | 2.1500 | +0.0081 | 485 - 515 | 2.1537 | 2.1452 | 2.1482 | 1.0 | 2.1446 | 1.0 | 2.1221 | 1.3 | 117.4 |
| UK | (£) | - | - | - | - | - | - | - | - | - | - | - | 80.7 |
| Ecu | - | 1.3096 | +0.0022 | 089 - 102 | 1.3119 | 1.3076 | 1.3111 | -1.5 | 1.3133 | -1.1 | 1.3188 | -0.7 | - |
| SDR† | - | 0.937732 | - | - | - | - | - | - | - | - | - | - | - |
| **Americas** | | | | | | | | | | | | | |
| Argentina | (Peso) | 1.4909 | -0.0033 | 903 - 914 | 1.4961 | 1.4896 | - | - | - | - | - | - | - |
| Brazil | (Cr) | 1126.74 | +15.34 | 635 - 712 | 1129.00 | 1108.00 | - | - | - | - | - | - | - |
| Canada | (C$) | 2.0338 | +0.0013 | 327 - 348 | 2.0365 | 2.0284 | 2.0311 | 1.6 | 2.0289 | 1.0 | 2.0301 | 0.2 | 88.5 |
| Mexico | (New Peso) | 4.9593 | +0.0797 | 501 - 684 | 4.9684 | 4.9160 | - | - | - | - | - | - | - |
| USA | ($) | 1.4915 | -0.003 | 910 - 920 | 1.4964 | 1.4897 | 1.4894 | 1.7 | 1.4868 | 1.3 | 1.4819 | 0.6 | 66.3 |
| **Pacific/Middle East/Africa** | | | | | | | | | | | | | |
| Australia | (A$) | 2.0727 | -0.008 | 714 - 740 | 2.0815 | 2.0650 | 2.0712 | 0.9 | 2.0689 | 0.7 | 2.0669 | 0.3 | - |
| Hong Kong | (HK$) | 11.5223 | -0.0245 | 177 - 269 | 11.5818 | 11.5094 | 11.5093 | 1.4 | 11.5039 | 0.6 | 11.4548 | 0.6 | - |
| India | (Rs) | 46.7846 | -0.0979 | 652 - 040 | 46.9380 | 46.7320 | - | - | - | - | - | - | - |
| Japan | (Y) | 158.323 | +0.085 | 195 - 450 | 159.310 | 158.160 | 157.933 | 3.0 | 157.228 | 2.8 | 153.938 | 2.6 | 183.9 |
| Malaysia | (M$) | 4.0800 | +0.0078 | 749 - 851 | 4.0964 | 4.0655 | - | - | - | - | - | - | - |
| New Zealand | (NZ$) | 2.5874 | -0.0075 | 850 - 898 | 2.6000 | 2.5832 | 2.5903 | -1.3 | 2.5946 | -1.1 | 2.6032 | -0.6 | - |
| Philippines | (Peso) | 41.1282 | -0.0454 | 534 - 030 | 41.4030 | 40.8534 | - | - | - | - | - | - | - |
| Saudi Arabia | (SR) | 5.5934 | -0.0108 | 911 - 956 | 5.6109 | 5.5870 | - | - | - | - | - | - | - |
| Singapore | (S$) | 2.3673 | -0.0005 | 658 - 688 | 2.3716 | 2.3642 | - | - | - | - | - | - | - |
| S Africa (Com.) | (R) | 5.1491 | -0.0081 | 462 - 519 | 5.1697 | 5.1328 | - | - | - | - | - | - | - |
| S Africa (Fin.) | (R) | 6.7938 | +0.0349 | 841 - 035 | 6.8008 | 6.7342 | - | - | - | - | - | - | - |
| South Korea | (Won) | 1202.53 | -2.79 | 175 - 330 | 1207.10 | 1201.44 | - | - | - | - | - | - | - |
| Taiwan | (T$) | 39.3756 | -0.0643 | 624 - 888 | 39.4900 | 39.3300 | - | - | - | - | - | - | - |
| Thailand | (Bt) | 37.7723 | -0.0685 | 521 - 924 | 37.8740 | 37.7340 | - | - | - | - | - | - | - |

†SDR rate for Mar 14. Bid/offer spreads in the Pound Spot table show only the last three decimal places. Forward rates are not directly quoted to the market but are implied by current interest rates. Sterling index calculated by the Bank of England. Base average 1985 = 100. Bid, Offer and Mid-rates in both this and the Dollar Spot tables derived from THE WM/REUTERS CLOSING SPOT RATES. Some values are rounded by the F.T.

## DOLLAR SPOT FORWARD AGAINST THE DOLLAR

| Mar 15 | | Closing mid-point | Change on day | Bid/offer spread | Day's mid high | low | One month Rate | %PA | Three months Rate | %PA | One year Rate | %PA | J.P Morgan Index |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Europe** | | | | | | | | | | | | | |
| Austria | (Sch) | 11.9325 | +0.0437 | 300 - 350 | 11.9580 | 11.8975 | 11.953 | -2.1 | 11.98 | -1.6 | 11.99 | -0.5 | 103.1 |
| Belgium | (BFr) | 34.9400 | +0.138 | 200 - 600 | 35.0080 | 34.7900 | 35.025 | -2.9 | 35.145 | -2.3 | 35.44 | -1.4 | 104.3 |
| Denmark | (DKr) | 6.6213 | +0.0402 | 185 - 240 | 6.6330 | 6.5909 | 6.6368 | -2.8 | 6.6598 | -2.3 | 6.7013 | -1.2 | 103.9 |
| Finland | (FM) | 5.5394 | +0.0445 | 344 - 444 | 5.5568 | 5.4760 | 5.5451 | -1.2 | 5.5504 | -0.8 | 5.5556 | -0.3 | 78.5 |
| France | (FFr) | 5.7650 | +0.024 | 644 - 655 | 5.7785 | 5.7425 | 5.7798 | -3.1 | 5.7998 | -2.4 | 5.8373 | -1.3 | 105.1 |
| Germany | (D) | 1.6963 | +0.0065 | 960 - 965 | 1.7010 | 1.6894 | 1.7001 | -2.7 | 1.7049 | -2.0 | 1.7114 | -0.9 | 104.7 |
| Greece | (Dr) | 246.850 | +0.55 | 600 - 100 | 247.100 | 246.150 | 250.5 | -17.7 | 257.35 | -17.0 | 285.85 | -15.8 | 71.1 |
| Ireland | (I£) | 1.4343 | -0.003 | 333 - 353 | 1.4368 | 1.4304 | 1.4308 | 2.9 | 1.4259 | 2.3 | 1.4118 | 1.6 | - |
| Italy | (L) | 1671.65 | +2.4 | 090 - 240 | 1675.25 | 1669.05 | 1678.95 | -5.2 | 1690.7 | -4.6 | 1731.65 | -3.6 | 76.2 |
| Luxembourg | (LFr) | 34.9400 | +0.138 | 200 - 600 | 35.0080 | 34.7900 | 35.025 | -2.9 | 35.145 | -2.3 | 35.44 | -1.4 | 104.3 |
| Netherlands | (Fl) | 1.9055 | +0.0075 | 050 - 060 | 1.9097 | 1.8970 | 1.9087 | -2.0 | 1.9124 | -1.4 | 1.9169 | -0.6 | 103.6 |
| Norway | (NKr) | 7.3415 | +0.0298 | 405 - 425 | 7.3595 | 7.3100 | 7.3522 | -1.8 | 7.3647 | -1.3 | 7.3775 | -0.5 | 95.0 |
| Portugal | (Es) | 174.200 | +0.85 | 150 - 250 | 174.500 | 173.550 | 175.18 | -6.8 | 176.64 | -5.6 | 181.8 | -4.4 | 93.1 |
| Spain | (Pta) | 139.140 | +0.71 | 110 - 170 | 139.400 | 138.700 | 139.75 | -5.3 | 140.695 | -4.5 | 143.975 | -3.5 | 80.4 |
| Sweden | (SKr) | 7.8812 | +0.0267 | 774 - 849 | 7.9100 | 7.8389 | 7.9082 | -4.1 | 7.9455 | -3.3 | 8.0462 | -2.1 | 82.2 |
| Switzerland | (SFr) | 1.4415 | +0.009 | 410 - 420 | 1.4450 | 1.4350 | 1.4423 | -0.7 | 1.4423 | -0.2 | 1.4324 | 0.6 | 104.0 |
| UK | (£) | 1.4915 | -0.003 | 910 - 920 | 1.4964 | 1.4897 | 1.4894 | 1.7 | 1.4868 | 1.3 | 1.4819 | 0.6 | 89.4 |
| Ecu | - | 1.1390 | -0.0042 | 388 - 391 | 1.1429 | 1.1373 | 1.136 | 3.1 | 1.1322 | 2.4 | 1.1235 | 1.4 | - |
| SDR† | - | 1.40191 | - | - | - | - | - | - | - | - | - | - | - |
| **Americas** | | | | | | | | | | | | | |
| Argentina | (Peso) | 0.9996 | -0.0002 | 995 - 996 | 0.9996 | 0.9994 | - | - | - | - | - | - | - |
| Brazil | (Cr) | 755.435 | +11.775 | 430 - 440 | 755.440 | 755.420 | - | - | - | - | - | - | - |
| Canada | (C$) | 1.3636 | +0.0036 | 633 - 638 | 1.3638 | 1.3603 | 1.3639 | -0.2 | 1.3645 | -0.3 | 1.37 | -0.5 | 85.0 |
| Mexico | (New Peso) | 3.3250 | +0.06 | 200 - 300 | 3.3300 | 3.3100 | 3.3266 | -0.6 | 3.3294 | -0.5 | 3.34 | -0.5 | - |
| USA | ($) | - | - | - | - | - | - | - | - | - | - | - | 101.0 |
| **Pacific/Middle East/Africa** | | | | | | | | | | | | | |
| Australia | (A$) | 1.3897 | -0.0025 | 893 - 900 | 1.3914 | 1.3854 | 1.3908 | -0.9 | 1.3936 | -1.1 | 1.4012 | -0.8 | 88.4 |
| Hong Kong | (HK$) | 7.7253 | -0.0009 | 248 - 258 | 7.7264 | 7.7247 | 7.726 | -0.1 | 7.73 | -0.2 | 7.7488 | -0.3 | - |
| India | (Rs) | 31.3675 | -0.0025 | 650 - 700 | 31.3700 | 31.3650 | 31.4325 | -2.5 | 31.5675 | -2.6 | - | - | - |
| Japan | (Y) | 106.150 | +0.27 | 100 - 200 | 106.860 | 106.070 | 106.045 | 1.2 | 105.745 | 1.5 | 103.92 | 2.1 | 144.8 |
| Malaysia | (M$) | 2.7355 | +0.0107 | 330 - 380 | 2.7410 | 2.7251 | 2.7295 | 2.6 | 2.713 | 3.3 | 2.7855 | -1.8 | - |
| New Zealand | (NZ$) | 1.7348 | -0.0015 | 337 - 358 | 1.7382 | 1.7325 | 1.7364 | -1.1 | 1.7409 | -1.4 | 1.7551 | -1.2 | - |
| Philippines | (Peso) | 27.5750 | +0.025 | 000 - 500 | 27.7500 | 27.4000 | - | - | - | - | - | - | - |
| Saudi Arabia | (SR) | 3.7502 | +0.0003 | 499 - 504 | 3.7504 | 3.7500 | 3.7526 | -0.8 | 3.757 | -0.7 | 3.7757 | -0.7 | - |
| Singapore | (S$) | 1.5872 | +0.0029 | 867 - 877 | 1.5877 | 1.5850 | 1.5872 | 0.0 | 1.5872 | 0.0 | 1.6107 | -1.5 | - |
| S Africa (Com.) | (R) | 3.4523 | +0.0015 | 515 - 530 | 3.4580 | 3.4425 | 3.4666 | -5.0 | 3.4956 | -5.0 | 3.5928 | -4.1 | - |
| S Africa (Fin.) | (R) | 4.5550 | +0.0325 | 500 - 600 | 4.5800 | 4.5075 | 4.586 | -8.2 | 4.65 | -8.3 | - | - | - |
| South Korea | (Won) | 806.250 | -0.25 | 000 - 500 | 807.400 | 806.000 | 809.25 | -4.5 | 812.75 | -3.2 | 831.25 | -3.1 | - |
| Taiwan | (T$) | 26.4000 | +0.01 | 000 - 000 | 26.4000 | 26.3900 | 26.5025 | -4.7 | 26.65 | -3.8 | - | - | - |
| Thailand | (Bt) | 25.3250 | +0.005 | 200 - 300 | 25.3300 | 25.3200 | 25.395 | -3.3 | 25.535 | -3.3 | 25.675 | -1.4 | - |

†SDR rate for Mar 14. Bid/offer spreads in the Dollar Spot table show only the last three decimal places. Forward rates are not directly quoted to the market but are implied by current interest rates. UK, Ireland & ECU are quoted in US currency. J.P. Morgan indices shown for Mar 14. Base average 1990=100

## CROSS RATES AND DERIVATIVES

### EXCHANGE CROSS RATES

| Mar.15 | | BFr | DKr | FFr | DM | I£ | L | Fl | NKr | Es | Pta | SKr | SFr | £ | C$ | $ | Y | Ecu |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Belgium | (BFr) | 100 | 18.95 | 16.50 | 4.855 | 1.996 | 4784 | 5.454 | 21.01 | 498.6 | 398.2 | 22.55 | 4.126 | 1.919 | 3.903 | 2.861 | 303.8 | 2.514 |
| Denmark | (DKr) | 52.76 | 10 | 8.706 | 2.562 | 1.053 | 2524 | 2.878 | 11.09 | 263.1 | 210.1 | 11.90 | 2.177 | 1.013 | 2.060 | 1.510 | 160.3 | 1.326 |
| France | (FFr) | 60.61 | 11.49 | 10 | 2.943 | 1.210 | 2900 | 3.305 | 12.74 | 302.2 | 241.3 | 13.67 | 2.501 | 1.163 | 2.366 | 1.734 | 184.1 | 1.524 |
| Germany | (DM) | 20.60 | 3.904 | 3.398 | 1 | 0.411 | 985.4 | 1.123 | 4.328 | 102.7 | 82.02 | 4.644 | 0.850 | 0.395 | 0.804 | 0.589 | 62.57 | 0.518 |
| Ireland | (I£) | 50.11 | 9.496 | 8.267 | 2.433 | 1 | 2397 | 2.733 | 10.53 | 249.8 | 199.5 | 11.30 | 2.067 | 0.962 | 1.956 | 1.434 | 152.2 | 1.260 |
| Italy | (L) | 2.090 | 0.396 | 0.345 | 0.101 | 0.042 | 100. | 0.114 | 0.439 | 10.42 | 8.323 | 0.471 | 0.086 | 0.040 | 0.082 | 0.060 | 6.350 | 0.053 |
| Netherlands | (Fl) | 18.34 | 3.475 | 3.025 | 0.890 | 0.366 | 877.2 | 1 | 3.853 | 91.41 | 73.01 | 4.134 | 0.757 | 0.352 | 0.716 | 0.525 | 55.70 | 0.461 |
| Norway | (NKr) | 47.59 | 9.019 | 7.852 | 2.311 | 0.950 | 2277 | 2.595 | 10 | 237.3 | 189.5 | 10.73 | 1.963 | 0.913 | 1.858 | 1.362 | 144.6 | 1.196 |
| Portugal | (Es) | 20.06 | 3.801 | 3.309 | 0.974 | 0.400 | 959.6 | 1.094 | 4.215 | 100. | 79.87 | 4.523 | 0.828 | 0.385 | 0.783 | 0.574 | 60.93 | 0.504 |
| Spain | (Pta) | 25.11 | 4.760 | 4.144 | 1.219 | 0.501 | 1201 | 1.370 | 5.277 | 125.2 | 100. | 5.663 | 1.036 | 0.482 | 0.980 | 0.719 | 76.29 | 0.631 |
| Sweden | (SKr) | 44.35 | 8.405 | 7.317 | 2.153 | 0.885 | 2122 | 2.419 | 9.319 | 221.1 | 176.6 | 10 | 1.830 | 0.851 | 1.731 | 1.269 | 134.7 | 1.115 |
| Switzerland | (SFr) | 24.24 | 4.593 | 3.999 | 1.177 | 0.484 | 1160 | 1.322 | 5.093 | 120.8 | 96.51 | 5.465 | 1 | 0.465 | 0.946 | 0.693 | 73.63 | 0.609 |
| UK | (£) | 52.11 | 9.876 | 8.598 | 2.530 | 1.040 | 2493 | 2.842 | 10.95 | 259.8 | 207.5 | 11.75 | 2.150 | 1 | 2.034 | 1.491 | 158.3 | 1.310 |
| Canada | (C$) | 25.62 | 4.855 | 4.227 | 1.244 | 0.511 | 1226 | 1.397 | 5.383 | 127.7 | 102.0 | 5.777 | 1.057 | 0.492 | 1 | 0.733 | 77.83 | 0.644 |
| US | ($) | 34.95 | 6.624 | 5.767 | 1.697 | 0.698 | 1672 | 1.906 | 7.344 | 174.2 | 139.2 | 7.881 | 1.442 | 0.671 | 1.364 | 1 | 106.2 | 0.879 |
| Japan | (Y) | 329.2 | 62.39 | 54.31 | 15.98 | 6.570 | 15749 | 17.95 | 69.17 | 1641 | 1311 | 74.23 | 13.58 | 6.317 | 12.85 | 9.419 | 1000. | 8.275 |
| Ecu | | 39.78 | 7.539 | 6.563 | 1.931 | 0.794 | 1903 | 2.169 | 8.358 | 198.3 | 158.4 | 8.969 | 1.641 | 0.763 | 1.553 | 1.138 | 120.8 | 1 |

Yen per 1,000: Danish Kroner, French Franc, Norwegian Kroner and Swedish Kronor per 10; Belgian Franc, Escudo, Lira and Peseta per 100.

■ **D-MARK FUTURES** (IMM) DM 125,000 per DM

| | Open | Latest | Change | High | Low | Est. vol | Open int. |
|---|---|---|---|---|---|---|---|
| Jun | 0.5886 | 0.5857 | -0.0033 | 0.5889 | 0.5854 | 44,367 | 86,231 |
| Sep | 0.5848 | 0.5840 | -0.0033 | 0.5852 | 0.5840 | 127 | 2,708 |
| Dec | 0.5838 | 0.5837 | -0.0027 | 0.5840 | 0.5837 | 5 | 132 |

■ **JAPANESE YEN FUTURES** (IMM) Yen 12.5 per Yen 100

| | Open | Latest | Change | High | Low | Est. vol | Open int. |
|---|---|---|---|---|---|---|---|
| Jun | 0.9457 | 0.9414 | -0.0036 | 0.9463 | 0.9406 | 25,900 | 48,219 |
| Sep | 0.9495 | 0.9468 | -0.0025 | 0.9500 | 0.9461 | 85 | 1,373 |
| Dec | - | 0.9525 | - | - | 0.9525 | 7 | 398 |

■ **SWISS FRANC FUTURES** (IMM) SFr 125,000 per SFr

| | Open | Latest | Change | High | Low | Est. vol | Open int. |
|---|---|---|---|---|---|---|---|
| Jun | 0.6955 | 0.6924 | -0.0038 | 0.6960 | 0.6915 | 22,006 | 32,883 |
| Sep | 0.6950 | 0.6935 | -0.0037 | 0.6960 | 0.6928 | 96 | 269 |
| Dec | 0.6955 | 0.6950 | -0.0035 | 0.6965 | 0.6950 | 39 | 33 |

■ **STERLING FUTURES** (IMM) £62,500 per £

| | Open | Latest | Change | High | Low | Est. vol | Open int. |
|---|---|---|---|---|---|---|---|
| Jun | 1.4904 | 1.4856 | -0.0068 | 1.4910 | 1.4850 | 7,701 | 24,107 |
| Sep | - | 1.4820 | - | - | 1.4820 | 68 | 586 |
| Dec | - | 1.4800 | - | - | 1.4800 | 3 | 30 |

### EMS EUROPEAN CURRENCY UNIT RATES

| Mar 15 | Ecu cen. rates | Rate against Ecu | Change on day | % +/- from cen. rate | % spread v weakest | Div. ind. |
|---|---|---|---|---|---|---|
| Ireland | 0.808628 | 0.794880 | -0.00105 | -1.70 | 4.74 | 11 |
| Netherlands | 2.19672 | 2.17185 | -0.00033 | -1.13 | 4.14 | - |
| Belgium | 40.2123 | 39.8186 | -0.0307 | -0.98 | 3.98 | 7 |
| Germany | 1.94964 | 1.93305 | +0.00072 | -0.85 | 3.84 | - |
| France | 6.53883 | 6.57206 | +0.00248 | 0.51 | 2.44 | -4 |
| Denmark | 7.43679 | 7.54560 | +0.00642 | 1.46 | 1.47 | -10 |
| Spain | 154.250 | 158.534 | +0.179 | 2.78 | 0.18 | -19 |
| Portugal | 192.854 | 198.558 | +0.457 | 2.96 | 0.00 | -20 |
| NON ERM MEMBERS | | | | | | |
| Greece | 264.513 | 281.294 | +0.138 | 6.34 | -3.18 | - |
| Italy | 1793.19 | 1907.90 | -2.75 | 6.40 | -3.23 | - |
| UK | 0.786749 | 0.764017 | -0.000516 | -2.89 | 6.02 | - |

Ecu central rates set by the European Commission. Currencies are in descending relative strength. Percentage changes are for Ecu; a positive change denotes a weak currency. Divergence shows the ratio between two spreads: the percentage difference between the actual market and Ecu central rates for a currency, and the maximum permitted percentage deviation of the currency's market rate from its Ecu central rate.
(17/9/92) Sterling and Italian Lira suspended from ERM. Adjustment calculated by the Financial Times.

■ **PHILADELPHIA SE £/$ OPTIONS** £31,250 (cents per pound)

| Strike Price | CALLS Apr | May | Jun | PUTS Apr | May | Jun |
|---|---|---|---|---|---|---|
| 1.400 | 8.82 | 8.79 | 8.86 | - | 0.10 | 0.30 |
| 1.425 | 6.46 | 6.58 | 6.79 | 0.06 | 0.33 | 0.66 |
| 1.450 | 4.23 | 4.56 | 4.90 | 0.32 | 0.79 | 1.25 |
| 1.475 | 2.42 | 2.88 | 3.33 | 0.95 | 1.60 | 2.15 |
| 1.500 | 1.12 | 1.69 | 2.16 | 2.14 | 2.79 | 3.36 |
| 1.525 | 0.43 | 0.89 | 1.30 | 3.89 | 4.47 | 4.96 |

Previous day's vol., Calls 116,282 Puts 67,388 . Prev. day's open int., Calls 476,944 Puts 373,745

## WORLD INTEREST RATES

### MONEY RATES

| March 15 | Over night | One month | Three mths | Six mths | One year | Lomb. Inter. | Dis. rate | Repo rate |
|---|---|---|---|---|---|---|---|---|
| Belgium | - | 6¼ | 6⅜ | 6¼ | 6⅛ | 7.40 | 5.00 | - |
| week ago | - | 6¼ | 6⅜ | 6⅜ | 6⅛ | 7.40 | 5.00 | - |
| France | 6⅛ | 6⅛ | 6⅛ | 6⅛ | 5⅞ | 6.10 | - | 7.75 |
| week ago | 6⅛ | 6⅛ | 6¼ | 6⅛ | 5⅞ | 6.10 | - | 7.75 |
| Germany | 5.90 | 5.95 | 5.80 | 5.65 | 5.43 | 6.75 | 5.25 | 5.94 |
| week ago | 6.05 | 5.95 | 5.85 | 5.72 | 5.48 | 6.75 | 5.25 | 5.97 |
| Ireland | 6⅜ | 6⅜ | 6⅛ | 6⅛ | 6⅛ | - | - | 6.75 |
| week ago | 6⅜ | 6⅜ | 6⅜ | 6⅜ | 6⅛ | - | - | 6.75 |
| Italy | 8⅜ | 8⅛ | 8⅛ | 8⅜ | 8⅜ | - | 8.00 | 8.92 |
| week ago | 8⅛ | 8⅛ | 8¼ | 8⅜ | 8⅜ | - | 8.00 | 8.92 |
| Netherlands | 5.53 | 5.47 | 5.29 | 5.20 | 5.16 | - | 5.25 | - |
| week ago | 5.53 | 5.47 | 5.24 | 5.16 | 5.11 | - | 5.25 | - |
| Switzerland | 4 | 4⅜ | 4⅛ | 4 | 3⅞ | 6.625 | 4.00 | - |
| week ago | 4¼ | 4⅜ | 4⅛ | 4 | 3⅞ | 6.625 | 4.00 | - |
| US | 3⅜ | 3⅞ | 3⅞ | 4⅛ | 4⅜ | - | 3.00 | - |
| week ago | 3¼ | 3½ | 3⅞ | 4⅛ | 4½ | - | 3.00 | - |
| Japan | 2⅛ | 2⅛ | 2¼ | 2¼ | 2⅜ | - | 1.75 | - |
| week ago | 2¼ | 2⅛ | 2¼ | 2¼ | 2⅛ | - | 1.75 | - |
| ■ $ LIBOR FT London | | | | | | | | |
| Interbank Fixing | - | 3⅝ | 3⅞ | 4⅛ | 4⅝ | - | - | - |
| week ago | - | 3⅝ | 3⅞ | 4⅛ | 4⅜ | - | - | - |
| US Dollar CDs | - | 3.44 | 3.68 | 3.98 | 4.39 | - | - | - |
| week ago | - | 3.44 | 3.68 | 3.94 | 4.32 | - | - | - |
| SDR Linked Ds | - | 3⅛ | 3⅛ | 3⅞ | 4 | - | - | - |
| week ago | - | 3⅛ | 3⅞ | 3⅞ | 4 | - | - | - |

ECU Linked Ds mid rates: 1 mth 6⅛; 3 mths: 6⅛; 6 mths: 6 ; 1 year: 5⅞. $ LIBOR interbank fixing rates are offered rates for $10m quoted to the market by four reference banks at 11am each working day. The banks are: Bankers Trust, Bank of Tokyo, Barclays and National Westminster.
Mid rates are shown for the domestic Money Rates, US $ CDs and SDR Linked Deposits (Ds).

### EURO CURRENCY INTEREST RATES

| Mar 15 | Short term | 7 days notice | One month | Three months | Six months | One year |
|---|---|---|---|---|---|---|
| Belgian Franc | 6¼ - 6⅛ | 6¼ - 6⅛ | 6¼ - 6⅛ | 6³⁄₁₆ - 6¹⁄₁₆ | 6⅛ - 6 | 6¹⁄₁₆ - 5¹⁵⁄₁₆ |
| Danish Krone | 5¾ - 5½ | 6¼ - 6 | 6¼ - 6 | 6⅛ - 5⅞ | 6⅛ - 5⅞ | 5⅞ - 5⅝ |
| D-Mark | 5¹³⁄₁₆ - 5¹¹⁄₁₆ | 6 - 5⅞ | 5¹³⁄₁₆ - 5⅞ | 5¾ - 5¹¹⁄₁₆ | 5⅝ - 5½ | 5¹⁵⁄₁₆ - 5¹³⁄₁₆ |
| Dutch Guilder | 5⅝ - 5½ | 5⁹⁄₁₆ - 5⁷⁄₁₆ | 5½ - 5⅜ | 5⁷⁄₁₆ - 5⁵⁄₁₆ | 5⅜ - 5¼ | 5⁵⁄₁₆ - 5³⁄₁₆ |
| French Franc | 6⅝ - 6¼ | 6⅜ - 6¼ | 6⅜ - 6¼ | 6¼ - 6⅛ | 6¹⁄₁₆ - 5¹⁵⁄₁₆ | 5⅞ - 5¾ |
| Portuguese Esc. | 10¼ - 10 | 10¼ - 10 | 10 - 9¾ | 9¹¹⁄₁₆ - 9⁷⁄₁₆ | 9⁷⁄₁₆ - 9⅛ | 9⅜ - 9 |
| Spanish Peseta | 8⁵⁄₁₆ - 8⅛ | 8⁵⁄₁₆ - 8⅛ | 8¼ - 8⅛ | 8⅛ - 8 | 8⅛ - 7¹³⁄₁₆ | 8⅛ - 7⅞ |
| Sterling | 5⅞ - 5¾ | 5⅜ - 5⅛ | 5¼ - 5⅛ | 5⁵⁄₁₆ - 5³⁄₁₆ | 5⁷⁄₁₆ - 5⁵⁄₁₆ | 5⅝ - 5⅜ |
| Swiss Franc | 4¼ - 4 | 4¼ - 4 | 4⅛ - 4 | 4⅛ - 3¹⁵⁄₁₆ | 3¹⁵⁄₁₆ - 3¹³⁄₁₆ | 3¹⁵⁄₁₆ - 3¹³⁄₁₆ |
| Can. Dollar | 3⅞ - 3⅝ | 3¹¹⁄₁₆ - 3⁷⁄₁₆ | 3⅞ - 3⅝ | 4⅛ - 3¹⁵⁄₁₆ | 4½ - 4⅛ | 5⅛ - 4¹⁵⁄₁₆ |
| US Dollar | 3⅝ - 3¼ | 3⅝ - 3¼ | 3⅞ - 3⁵⁄₁₆ | 3⅞ - 3¾ | 4⅛ - 4 | 4⅝ - 4½ |
| Italian Lira | 9 - 7½ | 8⅝ - 7⅞ | 8⅜ - 7⅞ | 8⅜ - 7⅞ | 8⅛ - 7¾ | 7½ - 7⅛ |
| Yen | 2¼ - 2⅛ | 2¼ - 2⅛ | 2½ - 2⅛ | 2¹¹⁄₁₆ - 2⅜ | 2¹¹⁄₁₆ - 2⅜ | 2⅝ - 2⅜ |
| Asian $Sing | 3½ - 2½ | 3½ - 2½ | 3½ - 2½ | 4 - 3 | 4 - 3 | 4⅛ - 3¼ |

Short term rates are call for the US Dollar and Yen, others: two days' notice.

■ **THREE MONTH PIBOR FUTURES** (MATIF) Paris interbank offered rate

| | Open | Sett price | Change | High | Low | Est. vol | Open int. |
|---|---|---|---|---|---|---|---|
| Jun | 94.21 | 94.24 | +0.49 | 94.25 | 94.20 | 17,378 | 68,382 |
| Sep | 94.50 | 94.56 | +0.35 | 94.56 | 94.50 | 7,206 | 45,801 |
| Dec | 94.68 | 94.74 | +0.24 | 94.75 | 94.68 | 10,329 | 31,346 |
| Mar | 94.74 | 94.84 | +0.16 | 94.83 | 94.74 | - | 34,552 |

■ **THREE MONTH EURODOLLAR** (LIFFE)* $1m points of 100%

| | Open | Sett price | Change | High | Low | Est. vol | Open int. |
|---|---|---|---|---|---|---|---|
| Jun | 95.64 | 95.66 | -0.02 | 95.65 | 95.64 | 208 | 4379 |
| Sep | 95.25 | 95.29 | -0.01 | 95.26 | 95.25 | 51 | 2142 |
| Dec | 94.83 | 94.86 | -0.03 | 94.84 | 94.83 | 138 | 1421 |
| Mar | - | 94.64 | -0.03 | - | - | 0 | 481 |

■ **THREE MONTH EUROMARK FUTURES** (LIFFE)* DM1m points of 100%

| | Open | Sett price | Change | High | Low | Est. vol | Open int. |
|---|---|---|---|---|---|---|---|
| Jun | 94.56 | 94.60 | +0.04 | 94.60 | 94.54 | 37927 | 253231 |
| Sep | 94.82 | 94.87 | +0.05 | 94.90 | 94.82 | 34103 | 160032 |
| Dec | 94.96 | 95.04 | +0.08 | 95.08 | 94.96 | 39141 | 148343 |
| Mar | 95.02 | 95.13 | +0.11 | 95.15 | 95.02 | 9153 | 116426 |

■ **THREE MONTH EUROLIRA INT.RATE FUTURES** (LIFFE) L1000m points of 100%

| | Open | Sett price | Change | High | Low | Est. vol | Open int. |
|---|---|---|---|---|---|---|---|
| Jun | 91.83 | 91.94 | +0.13 | 91.97 | 91.82 | 10275 | 58538 |
| Sep | 92.08 | 92.19 | +0.12 | 92.19 | 92.08 | 5161 | 25711 |
| Dec | 92.21 | 92.30 | +0.12 | 92.32 | 92.17 | 3069 | 41455 |
| Mar | 92.16 | 92.31 | +0.15 | 92.32 | 92.12 | 2058 | 0 |

■ **THREE MONTH EURO SWISS FRANC FUTURES** (LIFFE) SFr1m points of 100%

| | Open | Sett price | Change | High | Low | Est. vol | Open int. |
|---|---|---|---|---|---|---|---|
| Jun | 96.18 | 96.19 | +0.01 | 96.20 | 96.16 | 2519 | 29567 |
| Sep | 96.24 | 96.27 | +0.03 | 96.27 | 96.24 | 687 | 6555 |
| Dec | 96.20 | 96.20 | +0.04 | 96.23 | 96.19 | 185 | 4540 |
| Mar | 96.10 | 96.10 | - | 96.10 | 96.10 | 50 | 0 |

■ **THREE MONTH ECU FUTURES** (LIFFE) Ecu1m points of 100%

| | Open | Sett price | Change | High | Low | Est. vol | Open int. |
|---|---|---|---|---|---|---|---|
| Jun | 94.15 | 94.20 | +0.05 | 94.20 | 94.15 | 1166 | 11520 |
| Sep | 94.35 | 94.42 | +0.07 | 94.42 | 94.35 | 987 | 10016 |
| Dec | 94.48 | 94.53 | +0.06 | 94.52 | 94.46 | 461 | 6730 |
| Mar | 94.48 | 94.55 | +0.07 | 94.52 | 94.48 | 140 | 0 |

* LIFFE futures traded on APT

■ **THREE MONTH EURODOLLAR** (IMM) $1m points of 100%

| | Open | Latest | Change | High | Low | Est. vol | Open int. |
|---|---|---|---|---|---|---|---|
| Jun | 95.65 | 95.66 | +0.01 | 95.69 | 95.64 | 123,130 | 477,581 |
| Sep | 95.25 | 95.25 | -0.01 | 95.29 | 95.23 | 60,462 | 378,795 |
| Dec | 94.83 | 94.84 | -0.01 | 94.87 | 94.82 | 51,668 | 282,407 |

■ **US TREASURY BILL FUTURES** (IMM) $1m per 100%

| | Open | Latest | Change | High | Low | Est. vol | Open int. |
|---|---|---|---|---|---|---|---|
| Jun | 96.06 | 96.07 | - | 96.09 | 96.06 | 4,619 | 33,367 |
| Sep | 95.71 | 95.72 | +0.01 | 95.74 | 95.71 | 358 | 6,111 |
| Dec | 95.37 | 95.36 | -0.01 | 95.39 | 95.37 | 34 | 2,934 |

All Open interest figs. are for previous day

■ **EUROMARK OPTIONS** (LIFFE) DM1m points of 100%

| Strike Price | CALLS Mar | Jun | Sep | PUTS Mar | Jun | Sep |
|---|---|---|---|---|---|---|
| 9400 | 0.13 | 0.57 | 0.85 | 0 | 0.01 | 0.03 |
| 9425 | 0 | 0.34 | 0.62 | 0.12 | 0.03 | 0.05 |
| 9450 | 0 | 0.16 | 0.43 | 0.37 | 0.10 | 0.11 |

Est. vol. total, Calls 8443 Puts 5699. Previous day's open int., Calls 311271 Puts 194610

■ **EURO SWISS FRANC OPTIONS** (LIFFE) SFr 1m points of 100%

| Strike Price | CALLS Mar | Jun | Sep | PUTS Mar | Jun | Sep |
|---|---|---|---|---|---|---|
| 9575 | 0.19 | 0.46 | 0.53 | 0 | 0.03 | 0.04 |
| 9600 | 0 | 0.23 | 0.33 | 0.06 | 0.05 | 0.09 |
| 9625 | 0 | 0.07 | 0.17 | 0.31 | 0.14 | 0.18 |

Est. vol. total, Calls 0 Puts 0. Previous day's open int., Calls 2026 Puts 3762

## UK INTEREST RATES

### LONDON MONEY RATES

| Mar 15 | Over-night | 7 days notice | One month | Three months | Six months | One year |
|---|---|---|---|---|---|---|
| Interbank Sterling | 6½ - 5½ | 5½ - 5¼ | 5¼ - 5⅛ | 5⁵⁄₁₆ - 5³⁄₁₆ | 5⁷⁄₁₆ - 5⁵⁄₁₆ | 5⅝ - 5½ |
| Sterling CDs | - | - | 5³⁄₁₆ - 5⅛ | 5¼ - 5³⁄₁₆ | 5⁷⁄₁₆ - 5⁵⁄₁₆ | 5⅝ - 5½ |
| Treasury Bills | - | - | 4¹⁵⁄₁₆ - 4⅞ | 4¾ - 4⅝ | - | - |
| Bank Bills | - | - | 4³¹⁄₃₂ - 4²⁹⁄₃₂ | 4¹⁵⁄₁₆ - 4⅞ | 4¹⁵⁄₁₆ - 4⅞ | - |
| Local authority deps. | 5¹³⁄₁₆ - 6¹¹⁄₁₆ | 5⁷⁄₁₆ - 5⁵⁄₁₆ | 5³⁄₁₆ - 5¹⁄₁₆ | 5⅛ - 5 | 5⅛ - 5 | 5⁵⁄₁₆ - 5³⁄₁₆ |
| Discount market deps. | 6 - 5 | 5½ - 5¼ | - | - | - | - |

UK clearing bank base lending rate 5¼ per cent from February 8, 1994

| | Up to 1 month | 1-3 month | 3-6 months | 6-9 months | 9-12 months |
|---|---|---|---|---|---|
| Certs of Tax dep. (£100,000) | 1½ | 4 | 3¾ | 3¾ | 3½ |

Certs of Tax dep. under £100,000 is 1½pc. Deposits withdrawn for cash ¼pc.
Ave. tender rate of discount 4.7881pc. ECGD fixed rate Stlg. Export Finance. Make up day February 28, 1994. Agreed rate for period Mar 26, 1994 to Apr 25, 1994, Schemes II & III 6.60pc. Reference rate for period Feb 1, 1994 to Feb 28, 1994, Schemes IV & V 5.268pc. Finance House Base Rate 5½pc from Mar 1, 1994

■ **THREE MONTH STERLING FUTURES** (LIFFE) £500,000 points of 100%

| | Open | Sett price | Change | High | Low | Est. vol | Open int. |
|---|---|---|---|---|---|---|---|
| Mar | 94.81 | 94.82 | +0.01 | 94.82 | 94.81 | 6638 | 55784 |
| Jun | 94.85 | 94.90 | +0.06 | 94.91 | 94.84 | 18089 | 110135 |
| Sep | 94.72 | 94.79 | +0.07 | 94.79 | 94.72 | 9499 | 74519 |
| Dec | 94.51 | 94.60 | +0.08 | 94.60 | 94.51 | 7399 | 97646 |

Traded on APT. All Open interest figs. are for previous day.

■ **SHORT STERLING OPTIONS** (LIFFE) £500,000 points of 100%

| Strike Price | CALLS Mar | Jun | Sep | PUTS Mar | Jun | Sep |
|---|---|---|---|---|---|---|
| 9475 | 0.07 | 0.17 | 0.20 | 0.01 | 0.08 | 0.23 |
| 9500 | 0.01 | 0.06 | 0.10 | 0.20 | 0.22 | 0.38 |
| 9525 | 0 | 0.01 | 0.04 | 0.44 | 0.42 | 0.57 |

Est. vol. total, Calls 1433 Puts 3200. Previous day's open int., Calls 202786 Puts 187509

### BASE LENDING RATES

| % | % | % |
|---|---|---|
| Adam & Company ...... 5.25 | Duncan Lawrie ......... 5.25 | * Roxburghe Guarantee Corporation Limited is no longer authorised as a banking institution. 6 |
| Allied Trust Bank ......... 5.25 | Exeter Bank Limited .... 6.25 | Royal Bk of Scotland .... 5.25 |
| AIB Bank ................... 5.25 | Financial & Gen Bank ... 6 | ●Smith & Williamson Secs . 5.25 |
| ●Henry Ansbacher ........ 5.25 | ●Robert Fleming & Co ... 5.25 | Standard Chartered ..... 5.25 |
| Bank of Baroda ........... 5.25 | Girobank .................. 5.25 | TSB ......................... 5.25 |
| Banco Bilbao Vizcaya... 5.25 | ●Guinness Mahon ........ 5.25 | ●United Bk of Kuwait .... 5.25 |
| Bank of Cyprus .......... 5.25 | Habib Bank AG Zurich . 5.25 | Unity Trust Bank Plc .... 5.25 |
| Bank of Ireland .......... 5.25 | ●Hambros Bank ......... 5.25 | Western Trust ............ 5.25 |
| Bank of India ............ 5.25 | Heritable & Gen Inv Bk. 5.25 | Whiteaway Laidlaw ...... 5.25 |
| Bank of Scotland ........ 5.25 | ●Hill Samuel .............. 5.25 | Yorkshire Bank ........... 5.25 |
| Barclays Bank ........... 5.25 | C. Hoare & Co ........... 5.25 | ● Members of British Merchant Banking & Securities Houses Association |
| Brit Bk of Mid East ..... 5.25 | Hongkong & Shanghai. 5.25 | * In administration |
| ●Brown Shipley .......... 5.25 | Julian Hodge Bank ..... 5.25 | |
| CL Bank Nederland .... 5.25 | ●Leopold Joseph & Sons 5.25 | |
| Citibank NA .............. 5.25 | Lloyds Bank ............. 5.25 | |
| Clydesdale Bank ........ 5.25 | Meghraj Bank Ltd ...... 5.25 | |
| The Co-operative Bank . 5.25 | Midland Bank ........... 5.25 | |
| Coutts & Co ............... 5.25 | Mount Banking .......... 5.25 | |
| Credit Lyonnais .......... 5.25 | NatWestminster ......... 5.25 | |
| Cyprus Popular Bank ... 5.25 | ●Rea Brothers ........... 5.25 | |

## MONEY MARKET FUNDS

### Money Market Trust Funds

[illegible]

### Money Market Bank Accounts

[illegible]

# WORLD STOCK MARKETS

## EUROPE

AUSTRIA (Mar 15 / Sch)

BELGIUM/LUXEMBOURG (Mar 15 / Frs.)

DENMARK (Mar 15 / Kr)

FINLAND (Mar 15 / Mka)

FRANCE (Mar 15 / Frs.)

GERMANY (Mar 15 / Dm.)

ITALY (Mar 15 / Lire)

NETHERLANDS (Mar 15 / Fls.)

NORWAY (Mar 15 / Kroner)

SPAIN (Mar 15 / Pts.)

SWEDEN (Mar 15 / Kronor)

SWITZERLAND (Mar 15 / Frs.)

## PACIFIC

JAPAN (Mar 15 / Yen)

HONG KONG (Mar 15 / H.K.$)

MALAYSIA (Mar 11 / MYR)

SINGAPORE (Mar 15 / S$)

AUSTRALIA (Mar 15 / Aust$)

## NORTH AMERICA

CANADA

TORONTO (Mar 15 / Can $) 4 pm close

MONTREAL (Mar 15 / Can $) 4 pm close

## AFRICA

SOUTH AFRICA (Mar 15 / Rand)

*Prices supplied by Telekurs*

NOTES - Prices on this page are as quoted on the individual exchanges and are mostly last traded prices. Highs/Lows are 1993-94, except Toronto & Montreal (daily). # Dealings suspended. xd Ex dividend. xc Ex scrip issue. xr Ex rights. xa Ex all.

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■ TOKYO - MOST ACTIVE STOCKS: Tuesday, March 15, 1994

| | Stocks Traded | Closing Prices | Change on day | | Stocks Traded | Closing Prices | Change on day |
|---|---|---|---|---|---|---|---|
| Nippon Steel | 11.1m | 354 | +7 | Denki Kagaku Kgy | 7.1m | 385 | +42 |
| NKK | 9.8m | 261 | +9 | NEC | 6.8m | 1,070 | +10 |
| Kawasaki Steel | 9.1m | 363 | +9 | Kubota | 6.5m | 695 | +10 |
| Hitachi | 7.4m | 954 | +4 | Komatsu | 6.3m | 972 | +33 |
| Toshiba | 7.3m | 795 | +2 | Nisshin Steel | 5.8m | 436 | +20 |

## INDICES

## US INDICES

| | Mar 11 | Mar 4 | Feb 25 | Year ago |
|---|---|---|---|---|
| Dow Jones Ind. Div. Yield | 2.61 | 2.62 | 2.62 | 2.98 |
| | Mar 9 | Mar 2 | Feb 23 | Year ago |
| S & P Ind. Div. yield | 2.37 | 2.39 | 2.36 | 2.48 |
| S & P Ind. P/E ratio | 24.53 | 24.34 | 26.09 | 26.18 |

■ STANDARD AND POORS 500 INDEX FUTURES $500 times index

| | Open | Latest | Change | High | Low | Est. vol. | Open int. |
|---|---|---|---|---|---|---|---|
| Mar | 467.60 | 467.10 | +0.30 | 467.60 | 467.10 | 24,119 | 76,063 |
| Jun | 468.00 | 468.45 | +0.35 | 468.95 | 467.90 | 67,815 | 145,684 |
| Sep | 470.30 | 470.60 | +0.50 | 470.60 | 470.30 | 68 | 3,761 |

Open interest figures are for previous day.

■ NEW YORK ACTIVE STOCKS

| Monday | Stocks traded | Close price | Change on day |
|---|---|---|---|
| Telefonos | 5,616,000 | 62¼ | -3¼ |
| Hanson | 4,529,600 | 20¾ | +⅛ |
| Unisys | 4,304,100 | 16¼ | +½ |
| IBM | 2,892,800 | 57½ | +1⅝ |
| Am T & T | 2,777,600 | 51⅛ | +¼ |
| Philip Morris | 2,717,000 | 56⅛ | +⅛ |
| Adv Micro | 2,422,200 | 27¾ | -½ |
| Pepsico | 2,160,200 | 35⅝ | -¼ |
| Am Express | 2,131,900 | 28⅝ | +⅛ |
| Walt Disney | 1,993,000 | 45⅞ | -1⅛ |

■ TRADING ACTIVITY

● Volume (million)

| | Mar 14 | Mar 11 | Mar 10 |
|---|---|---|---|
| New York SE | 260.139 | 303.211 | 333.480 |
| Amex | 16.022 | 16.523 | 18.249 |
| NASDAQ | 265.502 | 279.253 | 326.793 |
| NYSE | | | |
| Issues Traded | 2,798 | 2,762 | 2,779 |
| Rises | 1,152 | 1,126 | 705 |
| Falls | 945 | 952 | 1,474 |
| Unchanged | 701 | 684 | 600 |
| New Highs | 67 | 44 | 47 |
| New Lows | 82 | 118 | 113 |

■ CAC-40 STOCK INDEX FUTURES (MATIF)

| | Open | Sett Price | Change | High | Low | Est. vol. | Open int. |
|---|---|---|---|---|---|---|---|
| Mar | 2236.5 | 2265.0 | +38.0 | 2268.0 | 2233.0 | 26,108 | 44,790 |
| Apr | 2247.5 | 2276.0 | +38.0 | 2278.0 | 2247.5 | 786 | 3,986 |
| May | 2266.5 | 2279.5 | +38.0 | 2286.5 | 2266.0 | 394 | 2,733 |

Open interest figures for previous day.

† Correction. * Calculated at 15.00 GMT. ● Excluding bonds. ‡ Industrial, plus Utilities, Financial and Transportation. ♣ The DJ Indl. index theoretical day's highs and lows are the averages of the highest and lowest prices reached during the day by each stock; whereas the actual day's highs and lows (supplied by Telekurs) represent the highest and lowest values that the index has reached during the day. (The figures in brackets are previous day's). ♥ Subject to official recalculation.

4 pm close March 15

# NEW YORK STOCK EXCHANGE COMPOSITE PRICES

| 1993/94 High | Low | Stock | Div | Yld % | P/E | Sls 100s | High | Low | Close Quote | Chng Prev. Close |
|---|---|---|---|---|---|---|---|---|---|---|
| 16⅞ | 11½ | AAR | 0.48 | 2.8 | 575 | 402 | u17⅜ | 16⅞ | 17¼ | +⅜ |
| 29⅜ | 12¾ | A L Labs A | 0.18 | 1.1 | 37 | 74 | 16¼ | 16⅛ | 16¼ | +¼ |
| 67¼ | 54⅝ | AMP | 1.68 | 2.6 | 22 | 2053 | 64¼ | 63¾ | 63¾ | -½ |
| 72¾ | 55½ | AMR | | | 30 | 3983 | 63⅛ | 61⅛ | 63 | +1⅝ |
| 5 | 1¾ | ARX | | | 16 | 96 | 4¾ | 4¾ | 4¾ | |
| 56⅛ | 39⅞ | ASA | 2.00 | 4.4 | 29 | 206 | 45¾ | 45⅛ | 45¼ | |
| 30¾ | 22⅝ | AbbotL | 0.76 | 2.7 | 16 | 10045 | 28⅝ | 28⅛ | 28½ | +¼ |
| 13⅝ | 8¼ | Abitibi Pr | 0.50 | 3.7 | 8 | 20 | u13¾ | 13½ | 13½ | -⅛ |
| 16⅝ | 8¼ | Acplncein | | | 21 | 33 | 11⅞ | 11½ | 11½ | -⅜ |
| 36 | 25½ | ACE Ltd | 0.40 | 1.5 | 4 | 460 | 26⅞ | 26 | 26⅞ | +½ |
| 12⅝ | 10¾ | ACM Gvt In | 1.09 | 9.3 | | 289 | 11¾ | 11⅝ | 11¾ | |
| 10⅛ | 8¾ | ACM GvOpp | 0.80 | 8.6 | | 66 | 9¼ | 9⅛ | 9¼ | |
| 10⅝ | 8¾ | ACM Gvt Sp | 0.96 | 10.2 | | 263 | 9⅜ | 9¼ | 9⅜ | |
| 12¼ | 10½ | ACM Gvt Se | 1.09 | 10.3 | | 307 | 10¾ | 10⅝ | 10⅝ | -⅛ |
| 12¼ | 9⅝ | ACM Man | 1.06 | 11.1 | | 508 | 10 | 9¾ | 9¾ | -¼ |
| 9⅜ | 8⅜ | ACM Managd | 0.72 | 8.2 | | 42 | 8⅞ | 8¾ | 8¾ | -⅛ |
| 12⅜ | 7¾ | AcmeCv | 0.44 | 4.7 | 11 | 8 | 9½ | 9⅜ | 9⅜ | -⅛ |
| 11⅜ | 6⅜ | Acme Elect | | | 35 | 54 | 8¼ | 8⅛ | 8⅛ | |
| 28⅛ | 18⅜ | Acordia x | 0.60 | 2.2 | 14 | 59 | d28⅛ | 27⅞ | 27⅞ | |
| 9¼ | 6⅛ | Actava x | 0.36 | 5.2 | 2 | 205 | 7⅛ | 6¾ | 6⅞ | +⅛ |
| 16 | 10⅜ | Acuson | | | 100 | 721 | 13 | 12½ | 13 | +½ |
| 21¾ | 17⅜ | Adams Expr | 0.36 | 2.0 | 0 | 102 | 17¾ | 17⅝ | 17¾ | +⅛ |
| 68¼ | 45½ | Ad Micro | 3.00 | 5.1 | | 1332 | 59⅝ | 58½ | 59⅛ | +1½ |
| 32¾ | 16¾ | AdvMic | 3.00 | 10.5 | 12 | 22176 | 29⅛ | 28¼ | 28⅝ | +⅞ |
| 8⅛ | 5½ | Advest Grp | 0.16 | 2.5 | 10 | 72 | 6⅝ | 6⅛ | 6½ | |
| 24¾ | 14¼ | Advo Inc | 0.10 | 0.5 | 125 | 79 | 18⅞ | 18¾ | 18¾ | -¼ |
| 58½ | 41⅛ | Aegon ADR | 1.23 | 2.4 | 11 | 7 | 51 | 50¾ | 50¾ | -½ |
| 66¼ | 43⅜ | AetnaL | 2.76 | 4.9 | 10 | 3367 | 57⅝ | 56¼ | 56¾ | +⅛ |
| 34 | 24¾ | Aflac | 0.40 | 1.3 | 12 | 1815 | 30⅜ | 30 | 30⅛ | |
| 22⅛ | 16⅜ | Ahmanson | 0.88 | 5.1 | 11 | 1740 | 17⅜ | 17⅛ | 17¼ | -⅛ |
| 7¾ | 1⅜ | Aileen Inc | | | 3 | 529 | 3¼ | 2⅞ | 3¼ | -⅛ |
| 49⅞ | 37½ | AirPrC | 0.92 | 2.0 | 25 | 771 | 46⅞ | 46⅝ | 46¾ | +⅛ |
| 39⅞ | 18⅛ | Airbne Frt | 0.30 | 0.8 | 22 | 1468 | 38¼ | 37½ | 37⅝ | -¼ |
| 26 | 9⅜ | Airgas Inc | | | 38 | 238 | 22¼ | 22⅛ | 22⅛ | |
| 16⅛ | 10½ | Airlease | 1.84 | 12.0 | 11 | 135 | 15½ | 15⅜ | 15⅜ | -⅛ |
| 108½ | 101 | AlaPw8.16 | 8.16 | 7.8 | | 3 | 104 | 104 | 104 | |
| 16⅞ | 12¼ | Alaska Air | 0.20 | 1.2 | 6 | 240 | 16⅝ | 16⅜ | 16⅜ | -⅛ |
| 21 | 14¼ | Albany Int x | 0.35 | 1.7 | 35 | 63 | 20⅝ | 20⅜ | 20⅜ | |
| 28¼ | 20⅛ | AlbCuB | 0.28 | 1.3 | 15 | 56 | 22½ | 22¼ | 22¼ | -⅛ |
| 25¼ | 17 | AlCulvr A | 0.28 | 1.4 | 15 | 40 | 20⅛ | 20 | 20 | -⅛ |
| 29¾ | 23⅜ | Albtsn | 0.44 | 1.5 | 22 | 3911 | 28½ | 28 | 28½ | +¼ |
| 25 | 16⅞ | AlcnAl | 0.30 | 1.3 | 43 | 1672 | 23¾ | 23⅝ | 23¾ | |
| 58⅞ | 35⅛ | AlcoSt | 1.00 | 1.8 | 136 | 330 | 56¼ | 55⅞ | 55⅞ | -⅜ |
| 30½ | 19⅝ | AlexBrown | 0.60 | 2.1 | 5 | 524 | 29½ | 28⅞ | 28⅞ | -⅛ |
| 28⅞ | 17⅝ | AlexAl x | 1.00 | 5.3 | 34 | 342 | 19⅝ | 18¾ | 18⅞ | -⅜ |
| 24⅞ | 17 | Allegh Lud | 0.48 | 2.5 | 18 | 2452 | 19⅝ | 19¼ | 19½ | |
| 28½ | 23⅛ | AllegP x | 1.64 | 6.9 | 12 | 362 | 23⅞ | 23¾ | 23⅞ | |
| 29¼ | 13 | Allen Com x | 0.16 | 1.1 | 12 | 5116 | 14⅞ | 14¼ | 14¾ | -⅛ |
| 26⅜ | 20¾ | Allergan | 0.40 | 1.8 | 14 | 566 | 23 | 22⅝ | 22¾ | -¼ |
| 4⅜ | 2⅝ | Alliton | | | 11 | 2 | 3 | 3 | 3 | |
| 27⅝ | 16¾ | Allnce Cap | 1.64 | 6.2 | 27 | 953 | 26⅞ | 25⅝ | 26¼ | +1⅛ |
| 10½ | 8⅞ | Allnce Gl | 0.18 | 1.8 | | 95 | 10 | 9⅞ | 10 | +⅛ |
| 27⅝ | 16¾ | Ald Irish | 1.24 | 5.3 | 14 | 13 | 23⅝ | 23⅜ | 23⅝ | |
| 40⅝ | 28¾ | AldSig | 0.58 | 1.5 | 8 | 4386 | 39⅝ | 38⅞ | 39 | +⅜ |
| 32¼ | 23 | Alltel Crp | 0.88 | 3.2 | 19 | 1404 | 27½ | 27¼ | 27¼ | +⅛ |
| 7¾ | 3⅞ | Allwaste | | | 19 | 750 | 5¼ | 5 | 5⅛ | |
| 27¾ | 17½ | Alumax | | | 7 | 599 | 25⅞ | 25½ | 25⅞ | +⅜ |

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| 1993/94 High | Low | Stock | Div | Yld % | P/E | Sls 100s | High | Low | Close Quote | Chng Prev. Close |
|---|---|---|---|---|---|---|---|---|---|---|
| 32 | 24⅜ | Bay St Gas | 1.42 | 5.4 | 15 | 96 | 27 | 26½ | 26½ | -¼ |
| 25 | 21 | Bd Tr 1838 | 1.72 | 8.1 | | 8 | 21¼ | d21 | 21¼ | |
| 26 | 15 | Bear Stns | 0.60 | 2.8 | 5 | 1294 | 22 | 21⅝ | 21¾ | +¼ |
| 50¼ | 45½ | BearStPIA | 2.75 | 5.5 | | 70 | 50 | 49¾ | 50 | |
| 35 | 20½ | Bearings | 0.64 | 1.9 | 24 | 180 | 34⅜ | 34 | 34⅛ | |
| 28¾ | 19¾ | Beckman In | 0.40 | 1.5 | 21 | 220 | 26⅛ | 25⅞ | 25⅞ | +⅜ |
| 40¾ | 32⅝ | BectnD x | 0.74 | 1.8 | 14 | 2420 | 40⅝ | 39⅝ | 40 | +⅜ |



- C - [illegible]

- D - [illegible]

- E - [illegible]

- F - [illegible]

- G - [illegible]

- H - [illegible]

- I - [illegible]

- J - [illegible]

- K - [illegible]

- L - [illegible]

- M - [illegible]

- N - [illegible]

- O - [illegible]

- P - Q - [illegible]

- R - [illegible]

- S - [illegible]

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4 pm close March 15

# NYSE COMPOSITE PRICES

Continued from previous page

| 1993/94 High | Low | Stock | Div | Yld % | P/E | Sls 100s | High | Low | Close Quote | Chng Prev. Close |
|---|---|---|---|---|---|---|---|---|---|---|
| 29½ | 16⅞ | Sateg'd Sc | | | 13 | 115 | 29¼ | 28 | 28¾ | +½ |
| 24¾ | 13⅛ | Sfly0 x | 0.36 | 2.6 | 7 | 1311 | 14⅝ | 13⅞ | 14 | -⅝ |
| 26¼ | 10⅞ | Safeway | | | 24 | 1115 | 25⅛ | 24¾ | 24¾ | -⅛ |
| 6¼ | 2 | SafewayW96 | | | | 48 | 5⅞ | 5⅞ | 5⅞ | +⅛ |
| 55½ | 37½ | StJoePaper | 0.30 | 0.4 | 286 | 108 | 54½ | 53⅝ | 54½ | +⅞ |
| 37⅞ | 28 | StJoeL&P | 1.80 | 6.0 | 15 | 12 | 30⅛ | 29⅞ | 29⅞ | |
| 98 | 75 | StPaul | 3.00 | 3.7 | 8 | 576 | 80¾ | 79½ | 80¾ | +1¼ |
| 11⅞ | 6⅛ | Salant Crp | | | 10 | 181 | 8½ | 8⅛ | 8¼ | +¼ |
| 75¼ | 39⅞ | Sallie Mae | 1.40 | 3.2 | 9 | 1872 | 44⅝ | 43¾ | 44⅜ | +⅝ |
| 14⅞ | 12⅝ | Salomon Br | 0.34 | 2.5 | | 372 | 13½ | 13⅜ | 13½ | |
| 52⅝ | 34 | Salomn x | 0.64 | 1.2 | 7 | 3020 | u52¾ | 51⅜ | 51½ | -⅜ |
| 27⅞ | 22⅜ | SnDgGE x | 1.52 | 6.7 | 12 | 2463 | 23 | 22½ | 22⅝ | -¼ |
| 11⅞ | 8⅜ | SantaFeERe | 0.16 | 1.7 | 8 | 627 | 9½ | 9⅜ | 9⅜ | |
| 40¾ | 35¾ | SantaFePac | 2.80 | 7.2 | 18 | 40 | 39⅛ | 39 | 39 | -⅛ |
| 26¼ | 12¾ | SanFeP | 0.10 | 0.4 | 13 | 2158 | 24⅝ | 24¼ | 24⅛ | -⅛ |
| 31⅛ | 21 | SaraLee | 0.64 | 2.9 | 14 | 6270 | 22⅛ | 21¾ | 21¾ | -⅜ |
| 52¼ | 40⅛ | Scana Corp x | 2.82 | 6.1 | 12 | 154 | 46⅝ | 46⅛ | 46½ | |
| 25¾ | 16⅞ | Scecrp | 1.42 | 8.4 | 11 | 7189 | 17⅛ | 17 | 17 | -⅛ |
| 40½ | 23⅞ | SchererRP | | | 30 | 200 | 40¼ | 40 | 40⅜ | +½ |
| 71 | 51¾ | SchrPl | 1.80 | 3.1 | 13 | 4347 | 58½ | 57⅜ | 57½ | -½ |
| 68⅞ | 54⅝ | Schlmb | 1.20 | 2.1 | 23 | 7895 | 56⅝ | 56⅛ | 56½ | -¼ |
| 38⅜ | 16½ | Schwab(C) | 0.28 | 1.0 | 14 | 1873 | 29⅞ | 29¼ | 29⅜ | +⅛ |
| 9⅝ | 5⅝ | Schwitzer | | | 24 | 66 | 9 | 8⅝ | 8⅝ | -⅜ |
| 38⅞ | 17¾ | SciAtl | 0.12 | 0.4 | 81 | 2884 | 31¼ | 30¾ | 30¾ | -⅜ |
| 16⅞ | 9⅛ | Scotmin | 0.10 | 0.7 | 14 | 9 | 16 | 15 | 15 | |
| 46¾ | 31 | ScottP | 0.80 | 1.7 | 11 | 2025 | 45⅞ | 45⅛ | 45⅞ | +¾ |
| 28⅝ | 14¾ | ScuddrNAsF x | 0.21 | 0.9 | | 23 | 23⅝ | 23½ | 23⅝ | +⅛ |
| 12⅝ | 7½ | ScuddrNEuF | 0.16 | 1.4 | | 110 | 11¾ | 11½ | 11⅝ | |
| 31½ | 16¾ | SeaCnB | 0.70 | 4.1 | 8 | 19 | 17⅝ | 17⅛ | 17⅛ | -⅜ |

| 1993/94 High | Low | Stock | Div | Yld % | P/E | Sls 100s | High | Low | Close Quote | Chng Prev. Close |
|---|---|---|---|---|---|---|---|---|---|---|
| 34¼ | 24½ | TJX | 0.50 | 1.8 | 17 | 4627 | 27½ | 27 | 27¼ | |
| 19½ | 14⅝ | TNP Enterp | 1.63 | 9.4 | 17 | 34 | 17½ | 17⅜ | 17⅜ | |
| 77⅜ | 52½ | TRW | 1.88 | 2.5 | 22 | 1882 | 76 | 75¼ | 75⅜ | |
| 25⅞ | 5¼ | T2 Medcl x | 0.10 | 0.9 | 10 | 4484 | 11¼ | 10½ | 11⅛ | |
| 39¾ | 17⅛ | Taiwan Fd | | | | 390 | 25⅛ | 24⅞ | 24⅞ | |
| 9 | 3⅛ | Talleyind | 0.42 | 7.7 | 6 | 137 | 5⅝ | 5⅜ | 5½ | |
| 14½ | 6½ | Talley Pf | 1.00 | 9.3 | | 16 | 11 | 10⅝ | 10¾ | |
| 65 | 39½ | Tmbrds | 1.68 | 4.0 | 21 | 372 | 42 | 41¾ | 41⅞ | |
| 16⅝ | 8½ | Tandem | | | 3 | 9091 | 15⅜ | 14⅝ | 15⅜ | |
| 50¾ | 24⅝ | Tandy | 0.60 | 1.4 | 17 | 2489 | 45 | 44⅛ | 44⅜ | |
| 13½ | 10⅝ | Taurus Mun | 0.70 | 6.4 | | 5 | 11 | 11 | 11 | |
| 25⅞ | 19½ | Teco Energ | 0.96 | 4.7 | 15 | 744 | 20⅜ | 20⅛ | 20¼ | |
| 28¼ | 20⅛ | Tktrnr | 0.60 | 2.2 | 15 | 160 | 27⅝ | 27⅛ | 27½ | |
| 5 | 1⅛ | Telecom | | | 19 | 30 | 3½ | 3⅜ | 3½ | |
| 27¾ | 18½ | Teldyn | 0.80 | 3.9 | 15 | 973 | 20⅝ | 19⅞ | 20⅜ | |
| 48⅛ | 29½ | TeleEspSA | 1.05 | 2.5 | 8 | 4482 | 42¼ | 40⅞ | 41⅜ | |
| 76 | 44⅝ | Telmex | 0.96 | 1.6 | 12 | 78375 | 62¼ | 60⅝ | 60⅞ | |
| 54¾ | 37¼ | Templnl | 1.00 | 2.0 | 40 | 607 | 49⅞ | 49¼ | 49½ | |
| 30⅝ | 14⅜ | TempltEmMk | 0.17 | 0.7 | | 69 | 25¾ | 25½ | 25⅝ | |
| 9⅛ | 7⅛ | TempltGlob | 0.60 | 8.0 | | 372 | 7⅝ | 7½ | 7½ | |
| 9 | 7⅜ | TempltGlFd x | 0.60 | 8.1 | | 703 | 7½ | d7⅜ | 7⅜ | |
| 58¾ | 39⅛ | Tnneco | 1.60 | 2.8 | 22 | 5849 | 58 | 56⅞ | 57½ | |
| 30 | 21¾ | Teppco Pts | 2.20 | 7.6 | 11 | 155 | u30 | 29⅛ | 29⅞ | |
| 31⅛ | 13 | Teradyne | | | 29 | 510 | 29¼ | 29 | 29¼ | |
| 11⅞ | 8⅛ | Terex | 0.06 | 0.7 | 1 | 769 | 8½ | 8¼ | 8¼ | |
| 8⅜ | 3½ | Terra Inds | 0.08 | 1.0 | 24 | 260 | 8¼ | 8 | 8⅛ | |
| 12⅜ | 3 | Tesoro | | | 21 | 423 | 12⅛ | 11¾ | 11⅞ | |
| 69½ | 57⅝ | Texaco | 3.20 | 4.9 | 14 | 1807 | 65⅝ | 65¼ | 65¼ | |
| 53⅞ | 50⅜ | Texaco C x | 3.00 | 5.9 | | 12 | 51 | 50⅞ | 51 | |
| 38¼ | 21¼ | Texas Ind | 0.20 | 0.5 | 46 | 48 | 37 | 36⅞ | 36⅞ | |
| 88 | 45⅞ | TxInst | 0.72 | 0.8 | 17 | 5376 | u88½ | 86⅝ | 87 | |
| 21½ | 16¾ | Texas Pac x | 0.40 | 2.0 | 24 | 3 | 20⅛ | 20⅛ | 20⅛ | |
| 40¾ | 36½ | TxUtil x | 3.08 | 8.3 | 22 | 5764 | 38 | 37¼ | 37¼ | |
| 9 | 3¼ | Textl Inds | 1.10 | 27.5 | 2 | 82 | 4¼ | 4 | 4 | |
| 60⅝ | 40⅜ | Textrn x | 1.40 | 2.4 | 13 | 1402 | 57¾ | 57 | 57¼ | |

| 1993/94 High | Low | Stock | Div | Yld % | P/E | Sls 100s | High | Low | Close Quote | Chng Prev. Close |
|---|---|---|---|---|---|---|---|---|---|---|
| 28¾ | 19½ | Yankee Egy x | 1.16 | 5.0 | 13 | 27 | 23⅝ | 23⅜ | 23⅜ | -⅛ |
| 41½ | 31½ | York Int | 0.16 | 0.4 | 19 | 461 | 39 | 38¼ | 38¾ | -¼ |
| 1⅝ | ⅞ | Zapata | | | 7 | 553 | 1⅛ | 1⅛ | 1¼ | |
| 13½ | 5⅞ | ZnthEl | | | 3 | 3856 | 11⅞ | 11⅛ | 11⅞ | +⅝ |
| 29¼ | 19⅝ | Zenith Nat | 1.00 | 4.7 | 7 | 18 | 21½ | 21¼ | 21¼ | -½ |
| 8 | 6½ | Zenix Inc | 0.82 | 10.5 | | 80 | 7¾ | 7⅝ | 7¾ | |
| 16⅝ | 12⅝ | Zero | 0.40 | 3.0 | 16 | 23 | 13⅝ | 13½ | 13½ | -⅛ |
| 40¼ | 25⅛ | Zurn Ind x | 0.88 | 3.2 | 89 | 217 | 28¼ | 27¾ | 27⅞ | -¼ |
| 13⅞ | 12⅝ | Zweig Fund | 1.24 | 9.2 | | 154 | 13½ | 13⅜ | 13½ | +⅛ |
| 10⅞ | 9½ | Zweig Tot x | 0.84 | 8.3 | | 422 | 10⅛ | 9⅞ | 10⅛ | +⅛ |

Price data supplied by Telekurs

Yearly highs and lows for NYSE reflect the period from Jan 1 1993. Where a split or stock dividend amounting to 25 percent or more has been paid, the year's high-low range and dividend are shown for the new stock only. Unless otherwise noted, rates of dividend are annual disbursements based on the latest declaration. Sales figures are unofficial.

# AMEX COMPOSITE PRICES

4 pm close March 15

# NASDAQ NATIONAL MARKET

4 pm close March 15

AMERICA

# Economic news fails to give Dow impetus

## Wall Street

US share prices slipped yesterday morning in spite of a rally in the bond market and more favourable news on the economy, *writes Frank McGurty in New York.*

By 1 pm, the Dow Jones Industrial Average was 2.74 lower at 3,860.24, while the more broadly based Standard & Poor's 500 was up 0.58 at 467.97. In the secondary markets, the American SE composite was off 0.21 at 467.85, but the Nasdaq composite managed to add 2.27 at 795.07.

After ignoring further weakness in the US Treasury market the previous session, stocks were unmoved by yesterday's rebound in bond prices. At best, share prices struggled into positive territory during the course of the morning, aided by some solid numbers on industrial production, coupled with a tame report on producer price inflation.

The Labor Department reported a 0.5 per cent increase in the February producer price index, but the stronger-than-expected reading was largely attributed to a big jump in energy prices, due to harsh winter weather last month. Excluding energy and food, producer prices inched 0.1 per cent ahead, against a consensus forecast of 0.3 per cent.

The encouraging figure triggered heavy buying of the benchmark 30-year government bond, which is especially sensitive to inflationary expectations. Yields fell well below the worrisome 7.0 per cent level, giving some breathing space to equity investors troubled by a swift rise in long-term interest rates in recent weeks.

Still, enthusiasm was restrained, with most of the blue chips showing little movement during the first half of the session. By the afternoon, most indices were drifting into negative territory. The Nasdaq, buoyed by financial and transport issues, was the exception.

Kemper surged $20⅝, or nearly 50 per cent, to $61⅛ since the close of NYSE trading the previous session. The stock took off in overnight trading on news of a $2.2bn takeover bid for the financial services concern launched by GE Capital. The announcement came just as Monday's session was drawing to an end.

Overall, the financial sector showed the most strength. Among the Dow industrials, JP Morgan, up $1 at $65⅞, delivered one of the best performances. The investment bank revealed that it would back a proposed restructuring plan for Banco Espanol de Credito, the ailing Spanish bank in which it holds a 7.9 per cent stake.

Dreyfus, the mutual funds group to be acquired by Mellon Bank, picked up $1⅛ to $49.

Among insurance stocks, several groups benefited from a "strong buy" recommendations by Mr Steven Gavios, an analyst with Kidder Peabody in New York. Chubb climbed $1⅛ to $74¼, General Re was up $1⅛ at $106¾, American International jumped $2¼ to $85¼ and Marsh & McLennan added $⅞ to $82⅞.

Elsewhere, Pepsico was given a lift from an upgrading by AG Edwards & Sons. The stock gained $1⅛ to $37.

Time Warner continued its impressive run, climbing $1¼ to $40.

## Canada

Toronto continued higher at midday, fuelled by industrial, transport and banking stocks, as well as by an air of renewed economic confidence.

The TSE 300 composite index rose 16.48 to 4,486.84 at noon. Transportation issues led the market forward with a jump of 47.66, or 1.2 per cent, to 4,200.54.

EUROPE

# Domestic component in bourse revival

*Bourses found both domestic and international grounds for yesterday's gains, writes Our Markets Staff.*

**PARIS**, up nearly 2 per cent, was little affected by the US PPI figures, finding other and various reasons for the rise, including lingering hopes of a Buba rate cut tomorrow, as well as support from the futures market.

The CAC-40 index closed 43.50 higher at 2,258.52.

There was strong activity among media stocks. Canal Plus, in particular, was one of the session's most active performers, adding FFr54 or 6 per cent to FFr1,050. It was suggested that the group was helped by reports that the government was reviewing its request for a financial commitment towards the development of a cable network.

Lyonnaise des Eaux-Dumez, the construction group, up FFr8 at FFr592, announced that its Dumez and GTM-Entrepose units would form a joint venture. GTM dipped FFr28 or 5 per cent to FFr480, on the news.

Euro Disney, suspended limit down at one stage during the morning, recovered to close the day up 85 centimes at FFr34.70.

**FRANKFURT** consolidated most of Monday afternoon's gains, the Dax index showing a session rise of 20.42, and moved on again after hours with the Ibis-indicated Dax closing at 2,178.91.

Brokers said that Monday afternoon's gains reflected Morgan Stanley's raising of its recommended weighting in German equities. Turnover rose again, from DM8.5bn to DM9.5bn.

Sentiment was lifted by Bayer which, unexpectedly, said that it would hold the dividend at DM11. After a DM2.50 rise on the session the chemical group rose another DM4.50 to DM380 after hours.

Relative strength continued in financials, in Siemens as it caught up with other blue chips and in Volkswagen. But the most striking Dax stock gain was in Schering: after an average response to Monday's progress report, the pharmaceutical group put on DM37, or 3.6 per cent to DM1,073.

Mr Mark Tracey of Goldman Sachs said that there were six reasons for being bullish about Schering: significant margin expansion in core pharmaceuticals; Betaseron, the new multiple sclerosis drug; cost savings potential; improvements in production techniques; strong cash flow; and benefits from AgrEvo, the joint venture with Hoechst in agrochemicals.

**AMSTERDAM** firmed with strong interest seen in the heavily weighted issues, DSM and Akzo Nobel, for example, adding a respective Fl 2.50 and Fl 2.80 to Fl 124.40 and Fl 228.20.

The AEX index strengthened 3.37 to 427.27.

Hoogovens, which is expected to release 1993 results tomorrow that are broadly expected to reveal another substantial loss, gained Fl 1.50 to Fl 68.70. Analysts expect the steel group to begin its return to profitable operation in 1994, with the likelihood also that dividend payments will be resumed.

Wolters Kluwer, the publisher, which satisfied investors with its 23 per cent gain in 1993 profits, added Fl 1.50 to Fl 119.50.

**ZURICH** finished higher on the back of firmer US bonds, which rose after the release of the US PPI figures. The SMI index rose 36.4 or 1.3 per cent to 2,906.9 but trading volume remained low.

Roche certificiates, the most active issue, put on SFr140 to SFr7,190.

SMH bearers slipped SFr20 to SFr880 amid doubts about further growth in the watchmaker's market penetration, and the view that the Swatchmobile small car project still had a long way to go.

Surveillance rose SFr70 to SFr2,110 after the inspection and verification services group said that it expected its 1994 results to be in line with the 1993 outcome.

**MILAN** maintained its positive tone in spite of some selling ahead of today's end of the monthly account. The Comit index added 4.28 to 678.06.

Demand from domestic funds and foreign investors helped some industrials and blue chips higher. Fiat rose L33 to L4,998, Olivetti L55 to L2,510 and Montedison L21 to L1,211.

Banco di Napoli fell L27 to L2,141 as Moody's, the US credit ratings agency, said it had placed the bank's long-term credit ratings under review for possible downgrade. The recently privatised banks remained firm: IMI rose L27 to L12,640 and Credito Italiano put on L15 to L2,659. BCI added L125 to L6,337, ahead of the first quotation tomorrow of its privatisation shares. The new shares, sold by public offer at L5,400 without the L200 dividend, were quoted on the London grey market yesterday at around L6,100.

**MADRID** gave credit to futures, foreign bourses and domestic bonds as the general index rose 4.35 to 345.23 after a last minute spurt of buying.

Turnover rose to Pta32.14bn. There were specific interest rate hopes ahead of tomorrow's Bundesbank meeting, and the interest-rate sensitive utilities responded, showing the best gains of the day with Iberdrola, the most active stock, Pta25 higher at Pta1,105.

**TEL AVIV** broke a four-session losing streak on buying by domestic pension funds, the Mishtanim index shooting up by 13.2, or 6.75 per cent to 208.82. This followed share price manipulation scandals which had dropped the blue chip index by nearly 25 per cent from its 1994 high.

**FT-SE Actuaries Share Indices**

Mar 15 — THE EUROPEAN SERIES

| Hourly changes | Open | 10.30 | 11.00 | 12.00 | 13.00 | 14.00 | 15.00 | Close |
|---|---|---|---|---|---|---|---|---|
| FT-SE Eurotrack 100 | 1465.65 | 1464.37 | 1465.16 | 1464.80 | 1464.82 | 1467.83 | 1468.29 | 1469.36 |
| FT-SE Eurotrack 200 | 1504.67 | 1503.35 | 1504.23 | 1504.61 | 1505.09 | 1506.66 | 1509.52 | 1513.24 |

| | Mar 14 | Mar 11 | Mar 10 | Mar 9 | Mar 8 |
|---|---|---|---|---|---|
| FT-SE Eurotrack 100 | 1466.59 | 1431.65 | 1445.26 | 1445.47 | 1459.23 |
| FT-SE Eurotrack 200 | 1495.08 | 1471.59 | 1494.35 | 1496.63 | 1511.16 |

Base value 1000 (26/10/90) High/day: 100 - 1472.00; 200 - 1513.24 Low/day: 100 - 1463.85 200 - 1502.81.

Written and edited by William Cochrane, John Pitt and Michael Morgan

# Venezuelan equities are upset by tax proposal

## Transaction costs could rise, writes **Joseph Mann**

A new tax proposed last week by the Venezuelan government covering most debit transactions at domestic banks has sent tremors through the Caracas stock exchange.

On March 9, Mr Julio Sosa Rodriguez, Venezuela's minister of finance, presented a series of tax bills to congress, including a proposed tax of 0.75 per cent on debit transactions at banks that will primarily affect the country's private sector.

On the same day, the Caracas index reacted with a 4.3 per cent decline, and over the week retreated more than 10 per cent in local currency terms.

The index recovered more than 3 per cent on Monday, but at midday yesterday, prices were beginning to weaken once more. The market underperformed the region last year, showing a 14 per cent gain in dollar terms, while turnover slipped by 28 per cent compared with 1992.

Although equity investors in Venezuela were – and are – worried about a number of problems, the proposed debit tax, as it is now being called, has given them a new headache.

The tax, still to be approved by congress, has also raised fears that trading will move offshore and that foreign investors will find the country's equity market less attractive.

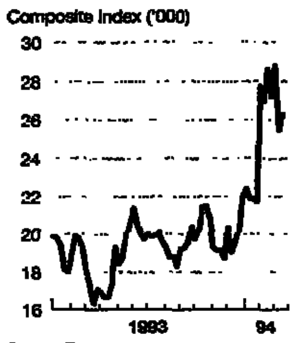
With some exceptions, banks will deduct the tax from the accounts of individuals or companies whenever they order a debit to their accounts, including issuing cheques or making an electronic payment.

A stock transaction requires at least four cheques or debit orders, each of which would be taxed under the proposal. The new levy would increase transaction costs significantly for domestic investors, and would have an even greater effect on foreigners.

Ms Norys Aguirre, president of the stock exchange – the Bolsa de Valores de Caracas – has asked the government to exclude exchange transactions from the proposed levy. She warned that investors, especially from overseas, would be driven away, noting that the tax would have theoretically added more than $54m to last year's transaction costs.

**Venezuela**

Composite index ('000)



Source: Datastream

Brokers and investors are also worried that stock deals will simply move offshore in an effort to avoid the tax. Ms Aguirre pointed out that a similar tax in Argentina was eliminated soon after it was applied when the authorities realised that much of that stock exchange's activities had moved to Uruguay; many Argentinians also decided to carry out their daily business activities in cash rather than cheques.

The government has tried to soften the impact of the debit tax by noting that it will only be in effect until December 31 and that, originally, a tax of 2 per cent had been discussed.

The new tax is a sign of the desperate fiscal situation of President Rafael Caldera's administration, which took office on February 2. It is trying to cope with an economy in recession, a large fiscal deficit, high inflation, declining income from oil exports (one of its main sources of Treasury revenue), a banking crisis and other problems. It also hopes to raise additional revenues through a proposed luxury tax and aims to reduce income tax evasion.

Another tax initiative involves lifting the ceiling on corporate and individual income tax from 30 per cent to 34 per cent. While this is not a crippling increase, businessmen generally are unhappy as they work their way through the second year of a recessionary economy.

The failure last January of Banco Latino, the country's second largest bank, created an unexpected problem for the new government and provoked crises at several other banks. The cash-strapped government has so far been forced to supply Latino and other troubled banks with some $3bn in financial assistance.

No-one can say for sure how the debit tax will fare in the new congress, where the two political parties supporting Mr Caldera together hold under 25 per cent of seats in both the chamber of deputies and the senate.

The proposal got off to a bad start when Mr Henry Ramos, a spokesman for the Democratic Action Party (AD), said the tax had never worked anywhere else.

Mr Caldera's parties need the support of one of the other three, larger political blocs in congress in order to gain approval of the debit tax and other tax proposals. So far, none of the three groups – AD, the Christian Democrats or the left wing Radical Cause party – has indicated that it will back the president.

ASIA PACIFIC

# Region depressed by lack of foreign interest

## Tokyo

Profit-taking following Monday's rally depressed share prices, and the Nikkei 225 average finished marginally easier after moving within a narrow range on technical trading, *writes Emiko Terazono in Tokyo.*

The index lost 17.30 at 20,508.85 after a day's high of 20,654.17 in the morning and a low of 20,458.85 in the afternoon. Early buying by foreign investors supported equities, but the Nikkei 225 was caught later between profit-taking and arbitrage buying.

Traders were not discouraged by the falls because volume was heavy, with some 550m shares changing hands, against Monday's 514m. A Japanese fund manager said that while share prices still looked expensive on a price/earnings ratio basis, the risk of a fall in values had declined, helped by the fact that the economy seemed to have bottomed out. Rises outpaced falls by 550 to 449, with 147 issues unchanged.

The Topix index of all first section stocks added 3.07 at 1,642.94 and the Nikkei 300 gained 0.43 at 302.31. In London the ISE/Nikkei 50 index firmed 3.75 to 1,363.71.

Machinery issues drew buying after the release of favourable data showing an increase in industry orders. Minebea rose Y33 to Y748 and Nachi Fujikoshi Y9 to Y443.

The yen's retreat against the dollar supported high-technology issues. Sony put on Y30 at Y6,330 and TDK Y50 at Y4,450. However, some issues which had improved on the multimedia theme declined. Nippon Telegraph and Telephone dipped Y2,000 to Y952,000 and Fujitsu eased Y10 to Y1,040.

Mining issues, which had risen in tandem with the gold price, were lower. Mitsui Mining and Smelting declined Y9 to Y416 and Sumitomo Metal Mining Y4 to Y928.

Banks rose on arbitrage buying, Industrial Bank of Japan firming Y10 to Y3,290 and Sakura Bank Y60 to Y1,390.

In Osaka, the OSE average moved up 65.55 to 22,438.38 in volume of 172.7m shares.

## Roundup

Weak turnover and declining share prices typified the region. Kuala Lumpur, Jakarta and Karachi remained closed for holidays.

HONG KONG's turnover was down from HK$3.9bn to a provisional HK$3.47bn, against figures of more than HK$10bn in late-1993 when the market was booming. The Hang Seng index ended a net 116.51, or 1.2 per cent, down at 9,363.56 after an early 120-point gain.

US funds took profits and selling mainly hit blue chips, with Henderson Land falling HK$2.75 to HK$47.75, Sun Hung Kai Properties HK$1.50 to HK$58.50 and Hutchison Whampoa HK$1.25 to HK$32.25.

**TAIWAN** saw turnover shrink to its lowest this year, down from T$40.39bn to T$34.29bn, as the weighted index finished 59.63, or 1.1 per cent, weaker at 5,274.24, just one point above its 1994 low.

The heavily weighted financial sector was among the biggest losers, with China Trust and China Development down T$2 apiece to T$63.50 and T$119 respectively. It was said that reduced buying by foreign institutions was hurting the market.

**COLOMBO** blamed foreign inactivity or selling, local institutional profit-taking and a drive for liquidity in the retail market as the all-share index dropped a further 31.92, or 2.5 per cent, to 1,268.38. Turnover expanded from Rs116m to Rs142.8m.

**BOMBAY** edged up, but brokers said that trade was virtually paralysed by the implementation of a ban by the Securities and Exchange Board of India on forward trading. The BSE 30-share index rose 11.06 to 3,758.28.

The SEBI, India's main regulator for capital markets, had said that the carry forward, or badla system of trading, was leading to excessive speculation, and that it would allow resumption of the system only if stock exchanges implemented several measures to make trading more transparent.

**NEW ZEALAND** defied the regional trend, the NZSE-40 index moving ahead 27.98 to 2,249.41 as the market found support from stronger European bourses and a more stable local bond market.

## SOUTH AFRICA

A flurry of activity before the expiry of futures and options lifted equities in late trading. The overall index advanced 98 to 5,254, industrials 105 to 6,099 and golds 3 to 1,967.

Anglos climbed R4.50 to R229.50 and SAB R2 to R92.

## FT-ACTUARIES WORLD INDICES

Jointly compiled by The Financial Times Ltd., Goldman, Sachs & Co. and NatWest Securities Ltd. in conjunction with the Institute of Actuaries and the Faculty of Actuaries

| NATIONAL AND REGIONAL MARKETS | MONDAY MARCH 14 1994 | | | | | | | | FRIDAY MARCH 11 1994 | | | | | DOLLAR INDEX | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Figures in parentheses show number of lines of stock | US Dollar Index | Day's Change % | Pound Sterling Index | Yen Index | DM Index | Local Currency Index | Local % chg on day | Gross Div. Yield | US Dollar Index | Pound Sterling Index | Yen Index | DM Index | Local Currency Index | 1993/94 High | 1993/94 Low | Year ago (approx) |
| Australia (69) | 177.12 | 2.4 | 175.71 | 118.55 | 155.60 | 164.01 | 1.3 | 3.30 | 173.04 | 170.74 | 114.99 | 150.94 | 161.85 | 189.15 | 130.18 | 138.03 |
| Austria (17) | 190.11 | -0.6 | 188.59 | 127.23 | 167.00 | 166.89 | 0.4 | 0.93 | 191.16 | 188.63 | 127.03 | 166.75 | 166.29 | 195.41 | 139.63 | 148.50 |
| Belgium (42) | 170.33 | -0.2 | 168.97 | 114.00 | 149.63 | 146.19 | 0.3 | 3.90 | 170.76 | 168.50 | 113.47 | 148.95 | 145.79 | 170.76 | 141.92 | 144.65 |
| Canada (107) | 136.19 | 0.5 | 135.11 | 91.15 | 119.64 | 134.12 | 0.5 | 2.51 | 135.48 | 133.68 | 90.03 | 118.18 | 133.51 | 145.31 | 121.46 | 123.62 |
| Denmark (32) | 270.19 | -0.2 | 268.03 | 180.83 | 237.36 | 241.84 | 0.2 | 0.96 | 270.78 | 267.19 | 179.93 | 236.20 | 241.33 | 275.79 | 195.66 | 199.06 |
| Finland (22) | 149.65 | -0.2 | 148.46 | 100.16 | 131.46 | 172.57 | 0.1 | 0.94 | 149.96 | 147.97 | 99.66 | 130.81 | 172.33 | 156.72 | 70.02 | 73.14 |
| France (99) | 178.47 | 0.8 | 177.05 | 119.45 | 156.78 | 160.72 | 1.4 | 2.89 | 177.03 | 174.68 | 117.64 | 154.42 | 158.53 | 185.37 | 149.60 | 154.41 |
| Germany (59) | 136.36 | 1.1 | 135.27 | 91.26 | 119.79 | 119.79 | 1.8 | 1.73 | 134.84 | 133.05 | 89.60 | 117.62 | 117.62 | 142.38 | 107.59 | 113.27 |
| Hong Kong (56) | 408.41 | 1.0 | 405.16 | 273.35 | 358.79 | 405.12 | 1.0 | 2.60 | 404.47 | 399.11 | 268.78 | 352.82 | 401.17 | 506.56 | 233.84 | 247.56 |
| Ireland (14) | 192.53 | 0.7 | 191.00 | 128.86 | 169.14 | 188.74 | 1.2 | 3.16 | 191.15 | 188.62 | 127.02 | 166.74 | 186.56 | 209.33 | 140.98 | 140.98 |
| Italy (69) | 77.21 | 1.1 | 76.60 | 51.68 | 67.83 | 96.26 | 1.6 | 1.75 | 76.34 | 75.33 | 50.73 | 66.59 | 94.78 | 78.93 | 56.21 | 59.70 |
| Japan (469) | 155.16 | 0.5 | 153.92 | 103.85 | 136.31 | 103.85 | 1.2 | 0.78 | 154.38 | 152.33 | 102.58 | 134.66 | 102.58 | 165.81 | 114.51 | 115.17 |
| Malaysia (69) | 490.78 | -0.1 | 486.88 | 328.48 | 431.16 | 515.03 | 0.0 | 1.47 | 491.46 | 484.95 | 326.58 | 428.71 | 515.03 | 621.83 | 274.40 | 278.09 |
| Mexico (18) | 2192.23 | 1.2 | 2174.75 | 1467.22 | 1925.83 | 7825.79 | 0.2 | 0.64 | 2167.10 | 2138.37 | 1440.06 | 1890.34 | 7807.17 | 2647.08 | 1431.17 | 1547.39 |
| Netherland (26) | 202.72 | 0.5 | 201.11 | 135.68 | 178.09 | 175.61 | 1.2 | 3.11 | 201.68 | 199.01 | 134.02 | 175.93 | 173.56 | 207.43 | 161.72 | 161.72 |
| New Zealand (14) | 69.16 | 0.9 | 68.61 | 46.29 | 60.75 | 63.76 | 0.3 | 3.86 | 68.54 | 67.64 | 45.55 | 59.79 | 63.55 | 77.59 | 45.45 | 46.19 |
| Norway (23) | 201.40 | 1.3 | 199.79 | 134.79 | 176.92 | 199.87 | 1.7 | 1.64 | 198.74 | 196.10 | 132.06 | 173.36 | 196.46 | 206.42 | 148.19 | 148.19 |
| Singapore (45) | 320.86 | 0.0 | 318.30 | 214.75 | 281.87 | 234.25 | 0.0 | 1.75 | 320.92 | 316.67 | 213.25 | 279.94 | 234.25 | 378.92 | 213.57 | 216.98 |
| South Africa (60) | 267.15 | 0.9 | 265.02 | 178.80 | 234.68 | 264.07 | 0.4 | 2.10 | 264.85 | 261.34 | 175.39 | 231.03 | 263.10 | 280.28 | 161.99 | 166.47 |
| Spain (42) | 148.10 | 1.3 | 146.91 | 99.12 | 130.10 | 155.31 | 1.7 | 3.77 | 146.14 | 144.20 | 97.11 | 127.47 | 152.78 | 155.79 | 118.33 | 125.37 |
| Sweden (36) | 222.39 | 1.0 | 220.62 | 148.84 | 195.37 | 258.58 | 1.3 | 1.45 | 220.18 | 217.26 | 146.31 | 192.07 | 255.27 | 230.02 | 154.79 | 160.44 |
| Switzerland (49) | 163.45 | 0.2 | 162.15 | 109.39 | 143.59 | 145.16 | 1.3 | 1.55 | 163.18 | 161.01 | 108.43 | 142.34 | 143.35 | 176.56 | 112.27 | 112.49 |
| United Kingdom (215) | 198.56 | 0.6 | 196.97 | 132.89 | 174.43 | 196.97 | 1.2 | 3.71 | 197.28 | 194.67 | 131.10 | 172.09 | 194.67 | 214.96 | 168.48 | 168.46 |
| USA (518) | 190.16 | 0.2 | 188.65 | 127.27 | 167.05 | 190.16 | 0.2 | 2.78 | 189.71 | 187.19 | 126.06 | 165.48 | 189.71 | 198.04 | 176.91 | 183.77 |
| EUROPE (745) | 170.50 | 0.7 | 169.14 | 114.11 | 149.78 | 162.22 | 1.3 | 2.82 | 169.32 | 167.08 | 112.52 | 147.70 | 160.14 | 178.58 | 138.88 | 139.02 |
| Nordic (113) | 214.68 | 0.6 | 212.96 | 143.68 | 188.59 | 217.65 | 0.9 | 1.26 | 213.47 | 210.64 | 141.85 | 186.20 | 215.70 | 220.60 | 145.85 | 149.15 |
| Pacific Basin (722) | 164.74 | 0.6 | 163.43 | 110.26 | 144.73 | 114.67 | 1.2 | 1.05 | 163.76 | 161.59 | 108.82 | 142.85 | 113.35 | 168.80 | 119.11 | 120.28 |
| Euro-Pacific (1467) | 166.99 | 0.6 | 165.65 | 111.76 | 146.69 | 133.35 | 1.2 | 1.81 | 165.92 | 163.72 | 110.26 | 144.73 | 131.75 | 170.78 | 127.32 | 127.83 |
| North America (625) | 186.81 | 0.2 | 185.32 | 125.03 | 164.11 | 186.28 | 0.2 | 2.77 | 186.34 | 183.87 | 123.82 | 162.54 | 185.82 | 192.73 | 173.70 | 180.05 |
| Europe Ex. UK (530) | 151.81 | 0.7 | 150.60 | 101.61 | 133.36 | 141.23 | 1.4 | 2.28 | 150.72 | 148.72 | 100.15 | 131.47 | 139.33 | 155.73 | 120.02 | 120.87 |
| Pacific Ex. Japan (253) | 258.18 | 1.1 | 256.12 | 172.80 | 226.81 | 236.40 | 0.8 | 2.59 | 255.39 | 251.97 | 169.69 | 222.75 | 234.54 | 296.21 | 164.34 | 170.31 |
| World Ex. US (1652) | 168.45 | 0.7 | 167.10 | 112.74 | 147.98 | 136.64 | 1.2 | 1.82 | 167.36 | 165.14 | 111.21 | 145.99 | 135.05 | 172.51 | 128.45 | 128.96 |
| World Ex. UK (1955) | 172.34 | 0.5 | 170.96 | 115.34 | 151.39 | 149.14 | 0.8 | 2.00 | 171.50 | 169.23 | 113.97 | 149.60 | 147.96 | 175.58 | 144.13 | 144.34 |
| World Ex. So. Af. (2110) | 174.00 | 0.5 | 172.70 | 116.51 | 152.93 | 152.53 | 0.8 | 2.16 | 173.23 | 170.93 | 115.11 | 151.11 | 151.26 | 176.56 | 148.30 | 148.43 |
| World Ex. Japan (1701) | 186.94 | 0.5 | 185.45 | 125.12 | 164.22 | 182.31 | 0.7 | 2.74 | 186.02 | 183.55 | 123.61 | 162.26 | 181.09 | 195.20 | 163.82 | 164.42 |
| The World Index (2170) | 174.65 | 0.5 | 173.25 | 116.89 | 153.42 | 153.40 | 0.8 | 2.16 | 173.78 | 171.47 | 115.48 | 151.58 | 152.13 | 176.97 | 146.31 | 146.46 |



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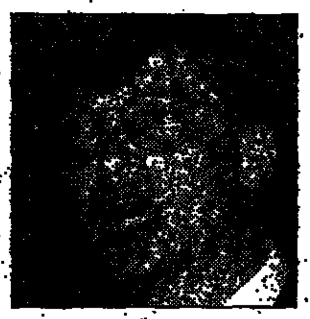
FINANCIAL TIMES SURVEY

# INFORMATION AND COMMUNICATIONS TECHNOLOGY

Wednesday March 16 1994

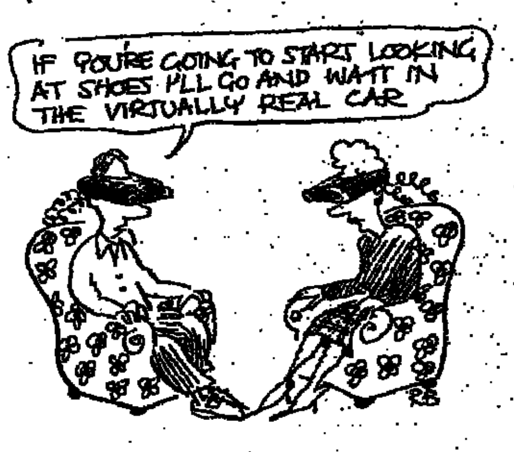
## IN THIS 20 PAGE SURVEY














*Editorial production: Michael Wiltshire*

AT&T's desktop video system at the Network Operations Centre in Bedminster, New Jersey. It brings together telephony and computing in a digital telephone and visual system that allows callers to see one another in a window on their screens while they work on documents.

## The shape of things to come

Floating down a Venetian canal or walking under the arched ceilings of a medieval cathedral could all happen in the not-too-distant future without the traveller leaving the armchair – see picture, right.

By holding a spaceball – that replaces the remote control pad – the armchair traveller can explore the world through a virtual reality interface and enhanced three-dimensional-type pictures on the home TV. This futuristic tourism is just one of the TV-based home services being developed by BT Laboratories at Martlesham Heath, near Ipswich in Suffolk.

Known as VRHS (for virtual reality home services), engineers are working on a range of intuitive interfaces that could transform the way that TV is viewed.

□ Pictured left is AT&T's video-conference system – the result of the collaboration between the information systems and business equipment units.

Sightseeing by spaceball: designer Andrew McGrath uses a virtual reality system to explore the antiquities of a sixth century basilica, created on screen. These systems could provide services of such realism that a viewer feels as if he is walking through the screen. The technology could also create a virtual shopping mall where items such as clothes could be viewed. There are also financial, educational and entertainment scenarios.

# A whirlwind of innovation

Business assumptions will be repeatedly challenged in the next few years as technological advances sweep the world of communications. Multimedia, mobile computing and groupware are among the hot topics, as **Alan Cane** explains here

The key technologies emerging as the catalyst of the next wave of business and social change have computing power and communications in common. Multimedia, mobile computing and groupware are the most promising business opportunities over the next three years. According to a group of computer companies canvassed last month by Input, a US-based marketing consultancy, client-server computing, networking in its various forms and document image processing were all seen as providing continuing business, but there was less enthusiasm for last year's fashionable topics including artificial intelligence and graphic information systems.

The computer company's choices are supported by a diversity of evidence.

□ Deals like Viacom's $10bn acquisition last month of Paramount Communications, the US information and entertainment group, exemplify the excitement multimedia is generating. In January 1993, 150 US newspapers published a total of 25 articles about multimedia: in December, the same newspapers published 425 pieces on the topic.

□ The market for notebook and subnotebook (hand-held) computers is expected to grow at 20 per cent or more this year compared with only six per cent or so for the industry as a whole. Prices of subnotebooks seem set to follow their desktop equivalents downwards especially with the launch of the Compaq Contura Aero at under £1000 and the relaunch later this year of IBM's Thinkpad 500. There is continuing interest in personal digital assistants (PDAs) combining computing power with communications despite a muted market response to the launch of Apple's Newton PDA.

□ The market for groupware – software designed to run on personal computer networks to support the co-ordination of office activities and exemplified by Lotus "Notes" – looks likely to double in the US and Europe over the next five years. According to Ovum, a London-based information technology consultancy, the installed base of PC networks has now reached the critical mass necessary to provide the incentive for the adoption of groupware.

*Many of the new advances in information technology are driven by the demands of the financial world. Observers believe that multimedia, for example, will initially be driven by business applications. Larger corporations are already investigating the potential of multimedia, although most have only developed a serious interest in the topic in the past year.*

## Elimination of barriers

What has changed over the past few months is the speed at which these esoteric technologies are becoming realities. Last month, for example, 400 senior telecommunications executives from companies including AT&T, BT, MCI and Mercury, packed a seminar in the US to hear claims that business and society would be transformed by multimedia through the elimination of barriers of time, space and form.

Opening the conference, Mr Rudy Puryear, managing partner, strategic change, at Andersen Consulting, warned that every business assumption would be repeatedly challenged in the next few years: "The mean time between surprises is shortening," he said.

Most of the corporations present were already investigating the potential of multimedia; most had only developed a serious interest in the topic in the past year.

To a large extent, their enthusiasm is being driven by commercial demands, rather than customer-need. Telecommunications companies like AT&T, MCI, BT and Mercury need to generate better margins from their networks by moving from "pots" to "pans" ("plain old telephone services" to "pretty awesome new stuff"). Computer companies need to find new ways to encourage customers to buy more computer power as prices fall to commodity levels. Among those which have already declared an interest in multimedia are Apple Computer, Intel, Silicon Graphics and Microsoft as well as the games market leaders Sega and Nintendo.

Mobile computers and groupware are firmly established in the market place. There are, however, question marks remaining over the potential of multimedia. It has not been helped by confusion over what the term implies.

The essential definition is the transformation of information of all kinds – textual, graphical, still and moving video pictures – into computer language ("bits") in which form it can be transmitted down a single communications channel – which could be a telephone line or a compact disk – to a modified television set or personal computer in the office or home.

The service is interactive; customers can send back instructions and requests through the network. What is important is that different bits of information are co-mingled in the transmission stream; the system is responsible for sorting out which are text, which are video and so on.

Dr Nicholas Negroponti, director of the Massachusetts Institute of Technology media laboratory, believes that the impact of multimedia on the business and social world is inevitable. He points to four trends:

□ First, the "disappearing desk top" as executives become peripatetic, using mobile computers on the move or while working from home.

□ Second, continuing miniaturisation which will make complex and bulky technologies such as speech recognition for pcs simple and easily transported.

□ Third, increased use of the so-called "Negroponti switch" – the use of fibre to bring multimedia to the office and home leaving precious broadcast bandwidth for mobile telephony and computing.

□ Fourth, the use of intelligent software "agents" to roam through electronic libraries gathering information of interest to their owners.

AT&T already has systems which make use of this advanced concept.

Four elements are required for the profitable development of multimedia systems:

□ Powerful computers are needed to store, process and keep track of the bits.

□ High capacity telecommunications channels are needed to transmit them to office or home.

□ There has to be a ready supply of information to feed the system.

□ The customer must be willing to pay for the new services.

All the technological elements for full scale multimedia are pretty well in place: the computer power, software and networks capable of transporting millions of bits a second at reasonable cost. Fibre optic technology is now staggeringly powerful, capable of carrying 150,000 times the volume of conventional telephone wires. Fibres can be spun from glass so pure that it is possible to see through a block 70 miles wide.

Chip technology is making possible the computing power to sort through all those bits. Dr Wei Yen, a senior vice-president at Silicon Graphics, a US company which specialises in the manipulation of electronic images, said that the necessary computing power would be available through the development of microprocessor chips called "media engines" with the power of a supercomputer but cost only $200 (£136). His media engine would be available next year.

Given the ability to make one billion calculations a second, he said, presenting life-like images on the screen did not present technical difficulties – "reality is all mathematics," he smiled.

The chips, which will process bits 64 at a time like a supercomputer, will be incorporated first in Nintendo's Reality Immersion Technology, claimed to allow players to step inside real-time, three dimensional worlds.

Nintendo's involvement gives the clue to the principal remaining problem: the search for attractive and marketable services to feed the multimedia machine. Entertainment is an obvious option.

## New electronic services

Time Warner Cable, the second largest cable operator in the US, intends to launch this autumn one of the largest tests yet of multimedia services. It will, in the first instance, allow customers to watch videos delivered via their telephone lines. The intention, however, is eventually to offer a "full service network."

About 4,000 homes around Orlando in Florida are being wired up for the trial, which could pave the way for a fuller range of electronic services, such as home banking and shopping.

The Orlando trial uses a combination of fibre optics and coaxial cable for transmission; in the UK, BT intends to offer a video-on-demand service offering acceptable picture quality over ordinary telephone lines.

The intention had been to open the service next month; Time Warner announced it would be delayed earlier this month to allow – "additional refinements of the underlying system software and the set-top terminal."

Coupled with the collapse at about the same time of the proposed merger between Bell Atlantic and the cable operator Tele-Communications Inc., observers were noting that the path to the establishment of successful multimedia systems will not be that easy.

Many observers, indeed, believe that multimedia will initially be driven by business applications. An option is telecommuting. France Telecom is experimenting with a range of technologies including electronic mail and groupware which could be combined so employees can work from home or electronic telecommuting centres.

□ The multimedia race: pages 3 and 4.
□ Developments and applications for virtual reality technology, page 17



## Personal computers: the technology battle intensifies

# Shoot-out between PowerPC and Intel's Pentium

Apple Computer's introduction of the first PowerPC Macintosh personal computers blows the starting whistle on what promises to be one of the toughest technology competitions in the history of the personal computer industry.

On the PowerPC team, together with Apple, will be Motorola and International Business Machines. Together, the three companies have co-developed a microprocessor architecture which they aim to establish as a new industry standard for PCs. They face the reigning champions of the PC microprocessor market, Intel and its league of PC-manufacturing technology partners, led by IBM.

One of the most curious aspects of this contest is that IBM is playing on both sides. Long a close ally of Intel, IBM is the largest manufacturer of Intel microprocessor-based PCs and says it intends to remain so. However, the computer company is also a co-developer and manufacturer of PowerPC and has stated that the new technology is central to its future strategy.

This ambiguity aside, the contest is a straight-forward shoot out between PowerPC and Intel's Pentium, the latest version of its long-established "x86" microprocessor lineage.

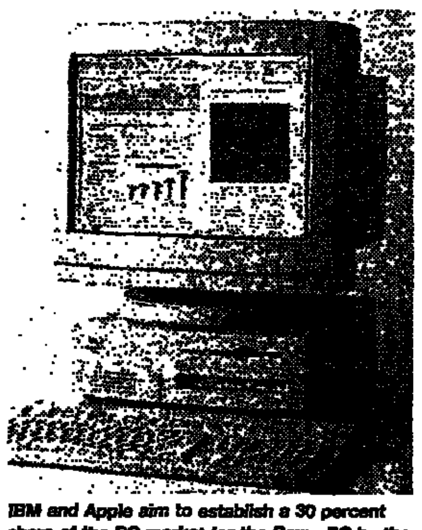
PowerPC has a Reduced Instruction Set Computing (RISC) architecture. Theoretically, this suggests that it may be faster than Intel's Pentium. However, PowerPC lacks the critical software base of Intel's microprocessors and its performance in commercial systems is relatively unproven.

In contrast, Intel's Pentium has a huge head start in the marketplace as the successor of the widely used Intel 386 and 486 microprocessors, the "brains" of most PCs in use today.

The Intel chips run Microsoft's popular MS-DOS and Windows operating system software and the thousands of application programs designed to work with them.

Apple's debut of PowerPC-based Macintosh computers will be a critical test of the new technology. Apple is expected to launch three "PowerMac" computers ranging in price from about $2,400 to about $4,000 to replace its current "Quadra" models aimed at business users. Apple says that it intends to convert 40 per cent of its Macintosh shipments to PowerPC by year's end, with the complete changeover occurring within three to four years.

For Apple, the PowerPC represents an important transition from Motorola's 68000 line of microprocessors, which it has used since the introduction of the Macintosh computer 12 years ago. Apple needed a new microprocessor to keep pace with competitors using Intel's chips, but its decision to join with IBM and Motorola in developing a brand new architecture makes the transition more risky.



*IBM and Apple aim to establish a 30 percent share of the PC market for the PowerPC by the end of the decade. Microsoft has announced plans to port Windows NT to the machine*

PowerPC's may have a speed advantage over Pentium. However, among existing Apple customers the PowerMac may be judged as much for its compatibility with existing Macintosh software as for its raw performance.

This could give the PowerPC a rough start in the personal computer market. According to industry reports, about 90 per cent of existing Macintosh software will run on the new Apple computers, but only via emulation software which will significantly slow down performance.

Thus, although PowerPC may be theoretically capable of outpacing the Intel Pentium, that may not be the practical experience of the first users of personal computers based on the new microprocessor.

Apple says that about 75 application programs designed specifically for the PowerMac will be available when the computers are introduced, and that hundreds more are in development.

However, software companies are unlikely to make development of applications programs for the PowerMac a high priority. Apple says that it expects to sell up to one million PowerMac computers in the first 12 months. While this would be a significant achievement for Apple, it presents a relatively limited market for software designed solely for the PowerMac.

In contrast, Intel expects about 15 per cent of all PCs sold this year, or approximately seven million units, to be based on its Pentium chips. Most of the remaining 40m PCs will contain Intel 486 microprocessors. Thus, Intel-based PCs represent a far larger potential market for software applications than the PowerMac.

Therefore even if the PowerMac exceeds Apple's expectations, it will hardly make a dent in Intel's dominance of the personal computer microprocessor market.

Intel and its backers, meanwhile, are targeting Apple's existing market share, aiming to take advantage of the uncertainties created by the transition to PowerPC.

Apple, however, is not alone in its plans to offer PowerPC based personal computers.IBM already offers a computer workstation based on the PowerPC microprocessor. The company is expected to introduce a broad range of "Power" machines for more general use, including portable PCs . But it is not yet clear how IBM will position these products relative to its strong Intel-based PC product line.

IBM is also actively seeking PowerPC endorsements from other computer makers. The first, Canon of Japan, said recently that it will use PowerPC in a new range of office computers and work with IBM and Motorola to develop versions of PowerPC for use in hand-held and notebook-sized computers.

In Taiwan, PowerPC has attracted great interest among PC circuit-board manufacturers. However, these sub-system manufacturers are unlikely to take a leadership role in developing the PowerPC market. Instead, they tend to wait for demand to develop in the US market.

IBM says it has sold over 800 PowerPC "reference specifications" to PC manufacturers and software developers interested in developing products around the new technology. Computers that adhere to these specifications will eventually be able to run a smorgasbord of operating systems and applications software, IBM says.

Microsoft has announced plans to port Windows NT to the PowerPC, and IBM's new Workplace OS will run DOS, Windows, and OS/2 applications on the PowerPC. PowerOpen, another "multipersonality" operating environment, is being developed specifically for PowerPC systems by Apple and IBM.

Together, IBM and Apple aim to establish a 30 percent share of the PC market for PowerPC by the end of the decade, leaving Intel with perhaps 60 per cent (the rest being clones of Intel microprocessors), down from about 80 percent today.

Thus while PowerPC may somewhat diminish Intel's market share, not even its most optimistic backers expect to overtake Intel's leadership in the microprocessor market in the short term.

In the longer term, the outcome of the PowerPC versus Intel battle is likely to depend as much on software developers as on the relative merits of each type of microprocessor.

**Louise Kehoe**

■ MULTIMEDIA IN THE OFFICE

# 'Evolutionary rather than revolutionary'

Bill Gates, founder and chairman of Microsoft, has poured scorn on most of the multimedia trials in the US and Europe, reports **Alan Cane.** Microsoft is meanwhile investing $100m a year in multimedia and aims to set the agenda in the technology

Microsoft, the world's largest personal computer software company, is harnessing its resources to a new goal: leadership in the design of multimedia systems.

It is already investing over $100m a year – out of an research and development budget of $473m – on the critical operating software. Mr Bill Gates, the company's founder and chairman, said earlier this month that the company had more people working on multimedia than any other software group.

The implication is that the company wants to establish its software as the global standard in multimedia just as its MS/DOS and Windows operating systems are the world standard for IBM's design of personal computers.

There have been some early clues: Microsoft is already working with Sega, the Japanese games console manufacturer, on an operating system for a new machine, although Mr Gates says the project is small and divorced from Microsoft's mainline operating systems development.

Some weeks ago, it bought Soft Image, a Canadian company which is market leader in the esoteric discipline of software for moving picture animation. The special effects in the film *Jurassic Park* are its work.

Furthermore, it has announced it intends to test its multimedia software in collaboration with Tele-Communications Inc.,(TCI), the largest US cable operator. A first fruit from the venture will be a new channel of programming aimed at the consumer market for computer hardware, software and accessories.

What Microsoft intends to provide is the operating software which will manage the flow of information of all kinds on to high speed networks and the software which will connect it to personal computer operating systems in the home or office. It may also provide some of the applications – a personal money management program, for example.

Mr Gates says "there are a lot of companies developing software for the 'information highway,' just as there were a lot of companies involved in operating systems at the beginning of the personal computer business. Everybody who is doing multimedia software will have lots of pilots. Based on the quality of those pilots, some will emerge stronger than others".

Mr Gates said Microsoft would begin testing home multimedia services in the US and Europe in 1995. He did not expect substantial returns on his investment for five years, although he thought that there would be substantive developments in multimedia in 1996-97 with entire cities converted to interactive networks.

Multimedia and the "information superhighway," the high-capacity network which will link vast repositories of information with modified television sets or personal computers, are creating intense interest among computer companies, telecommunications organisations and entertainment firms. They are jockeying to take advantage of what are expected to be lucrative new business opportunities.

Bill Gates, however, argues that most are taking the wrong approach – "dead ends" were how he described them – "because the user-interface is so simple, and because they do not tie in to personal computers in the right way, the results will be disappointing. The revenue and the usage that comes out of them will not justify the huge infrastructure costs."

While most of the trials to date have been designed to exploit domestic multimedia, offering, typically, menus of video films for home viewing, Mr Gates says that business will make use of the multimedia first.

"The first widespread use of these capabilities will be in business," he predicted. "It will involve things like video-conferencing and collaboration which would enable you to do your job without going into the office. Or it could help companies find expertise to help them out without the expert having to travel.

"The network itself could create electronic markets able to find a resource of any type."

"So, what in the past we have seen as electronic markets for currencies or stocks will move into items of all types where chequeing references and other kinds of working together can be done very effectively in electronic form."

"This will be done by extending the range of the personal computer. One of the early symptoms will be very low cost video conferencing where a PC is connected up to an ISDN (integrated services digital network). Within two or three years this will be extremely widespread.

(Intel, which makes the microprocessors used in the majority of the world's personal computers, earlier this year announced a low-cost set of components capable of turning a personal computer into a video-conferencing terminal).

Mr Gates thought that multimedia in the office would be evolutionary rather than revolutionary, driven by proven technologies like electronic mail – "the benefits of electronic mail are unbelievable. We could not run Microsoft without that capability.

"Today, some think of electronic mail and work group software and the Internet (an open, publicly available computer network spanning several continents) as separate things, but with some enhancements to Windows due in less than a year, we will bring all these things together."

Once the technology and benefits have been established in a business environment, that would be the time to move into the home.

Mr Gates was critical of the narrow range of many of the current multimedia trials: "Some of the early pilots will be particularly embarrassing because they will not have the breadth of applications," he said.

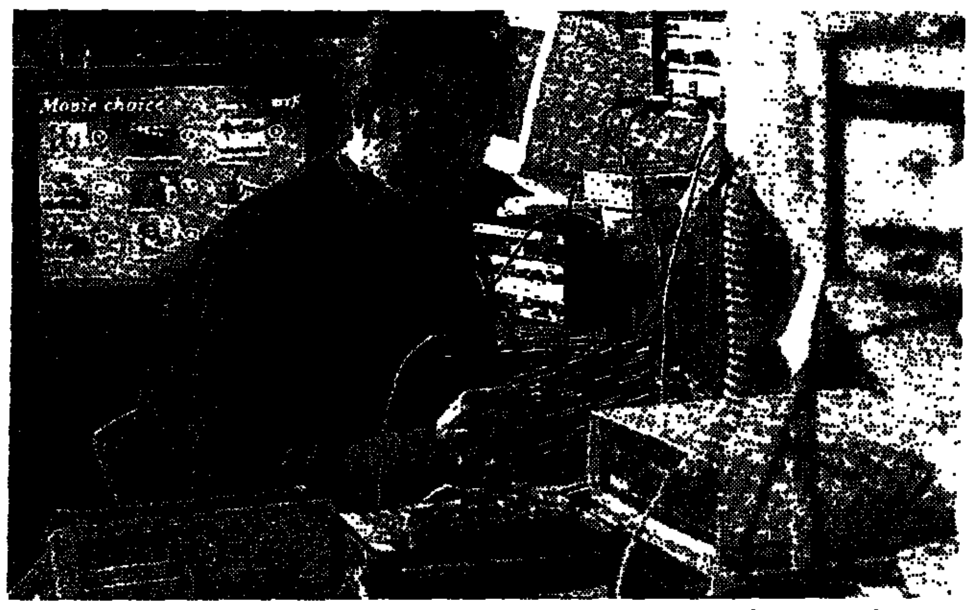
"The network operators running these pilots are acting against their own interests because they are going to prove exactly what they do not want to prove – that there will not be enough revenue generated to justify building the infrastructure."

"Until you have a broad range of applications, you will never be able to demonstrate the true potential of these systems. That is why instead of doing crummy pilots in 1994, we will start our trials in 1995."

He extended his criticism to Oracle, the US database specialist with which British Telecommunications has formed an alliance to test interactive entertainment services in the home. Oracle will provide the software and systems integration: "I'm sure Oracle will change its approach because it is a terrible approach," he said.

Bill Gates' comments have to be seen against a background of intense competition in the nascent multimedia business. Furthermore, he has never been slow to promote Microsoft's efforts and pick holes in the competition.

Bill Gates, founder and chairman of Microsoft, believed to be the richest man in America, says the first widespread use of multimedia technology will be in the business world before it spreads to home entertainment




A telecommunications engineer working on equipment for multimedia services which aim one day to bring entertainment and information services into the home, using the facilities of an ordinary television set and the telephone. Microsoft has had talks with BT among others about multimedia collaboration.

The multimedia market is still in its infancy, writes **Joia Shillingford**

# Computers which appeal to the senses

Multimedia brings sound and video to the personal computer. Like sex, it promises to appeal to the senses. Unlike sex, multimedia has yet to appeal to a wide audience.

However, one application which seems likely to increase the take-up rate of multimedia is desktop video-conferencing. The technology is also suitable for point-of-sale promotions, interactive educational/training software and – in very skilled hands – designing multimedia presentations.

Here and on the following page we look at two areas with most potential: desktop video-conferencing and multimedia at the point of sale.

■ **Desktop video-conferencing:** Some computers now come fully equipped for video-conferencing, allowing users to transmit live video images of themselves to other, similarly-equipped users, and to see on their PC the person they are talking to.

For example, Sun Microsystems, the US workstation company, says its new SPARCclassic Unix workstation, which costs £4,340 ($6,510), is the industry's lowest cost, fully-configured multimedia workstation. This includes camera, real-time video-capture and compression and a storage disk.

But most users will have to buy a multimedia kit if they want to carry out a video-conference in a window on their personal computer.

In April BT and Olivetti will begin selling multimedia kits which allow pc users to do this. The BT-Olivetti kits will cost £3,595; they include a small video camera which sits on top of the PC, a card which slots into the PC, and software.

In addition, the kit makes it possible for users to transmit *still* video images, photographs or sound. BT says the kit will send video at 15-frames a second when it goes on sale.

At this speed, video images will be rather jerky (it may look as if the person you are talking to has just come back from a boozy lunch). So "meeting" someone for the first time via a desktop video-conference is not ideal if you want to make a good impression. It is more suitable for follow-up "meetings," where being able to see the person you are talking to may give a better idea of their reactions.

Will this form of communication catch on?

Yes – according to Judith Jeffcoate, of the research con

Continued on next page

**Michael Dempsey** highlights IT applications in finance

# Focus for all banking activity

**Despite the high cost of applying the latest information technology, the banks – faced with mounting competition – can no longer survive without persistent investment in this area**

"We don't have warehouses full of cash. We have information about cash – *that* is our product." Thus, Peter Lazard, head of technology strategy and research at Abbey National sums up the relationship between banking and information technology, (IT).

On the surface, computer technology has become the focus of all banking activity. The real assets of any financial institution are now locked away in digital form. The rise of the technology-driven bank has coincided with fierce commercial pressures and a relentless struggle to keep overheads down.

IT briefly served to offer a 'holy grail' during the 1980s. Banks signed up for huge projects on the grounds that more information meant better business. By and large, they ended the decade disillusioned. Computers had proved their worth, handling vast quantities of data but they had not come cheap, and on the way banks found themselves employing a growing army of programmers and systems analysts.

With financial deregulation in the UK, retail banks have faced new competitors. Abbey National is a building society turned bank. Lazard notes that Abbey National has used computers for thirty years. Historically this meant large expensive mainframe machines. Falling hardware prices and the event of the micro-processor saw computing break out of the mainframe world. IT was suddenly available across the board.

"Technology was a barrier, due to cost. Now it is a gateway, an enabler rather than an inhibitor. That is very significant to us," Lazard says.

Abbey National operates systems ranging in size and supplier. Large mainframes from IBM and Unisys still provide the backbone for essential services such as savings, current accounts and insurance packages, but the advent of powerful workstations that do not require IT specialists to drive them has revolutionised the branch network. Abbey National has recently completed a four-year programme to install rings of workstations linked into local networks in each of its 685 branches.

These Olivetti machines are tied to a dedicated communications workstation at each site, which is networked on a national basis through lines leased from British Telecom. The object of the exercise is data-sharing through the communications host machine. In theory, any member of staff can work with any application on any workstation. The entire branch programme, including banking software, cost £95m. Over the last seven years Abbey National has invested a total of nearly £200m in IT.

Large though it seems, banks can no longer survive without persistent investment in IT, a condition Lazard defines as a growing dependency on information as a product. In theory, IT should allow banks to make better use of that information.

One of Abbey National's computers is an AT&T Teradata database engine, an extremely powerful box dedicated to analysing customer data. The price tag on the entire Teradata installation is around £10m, but this expensive specialist tool is the only option if Abbey National is to exploit customer profiles and mount direct sales campaigns.

Expert systems are computer programmes designed to replicate and multiply human knowledge. Barclays Bank is employing Lending Advisor to back up decisions on commercial lending. Software licences from supplier Syntelligence cost upwards of £600,000. If the expert system can succeed in producing a coherent and secure lending policy it is money well spent.

The world of the expert system is a clear example of IT coming to be used as a precision tool. In the past, vast banking IT projects stumbled because computers were employed in an indiscriminate fashion. Banks have learnt to target IT to deal with specific problems. Thus, multimedia, the mixing of sound and video images with data on one screen, is seen as having large potential for banks.

Multimedia computer terminals represent the logical next step in the march of the automatic teller machine. Condensing all the human functions of retail branch banking on to a machine has obvious attractions for institutions determined to slash payrolls.

Some banks are seizing on multimedia to squeeze extra revenue out of existing floorspace. Turin-based San Paolo Bank is installing Olivetti multimedia terminals in its branches. San Paolo rents out space on these machines to third parties who use the interactive video display to sell services. The Trustee Savings Bank (TSB) has 1350 branches. and is experimenting with multimedia equipment from AT&T's NCR arm in two branches, in Newcastle and Watford.

The rise of technology-driven financial centres has coincided with fierce commercial pressures and a relentless struggle to keep overheads down. Picture: Trevor Humphries

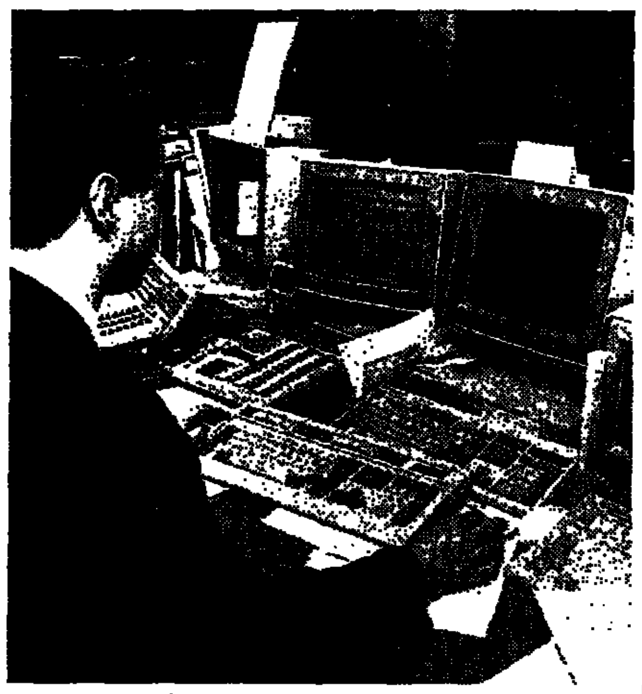
Paul Swainbrook's job as director of Teleservice at the TSB is to set up a telephone banking system. He has worked on the multimedia experiments and is blunt about the impact of such technology – "customer shock proved much more powerful than you might think." The TSB discovered that without human intervention, in the form of a Customer Care Officer, its account holders would not do business with a box.

This experiment justified a policy of applying IT in a restrained fashion.

"It's about not being supply-driven," says Swainbrook. "You start out by asking what the customer wants, and then give him the choice whether or not to use the technology. Why persist with a solution if the customer doesn't want it?"

The TSB is embarking on remote telephone banking courtesy of IT. Cheaper and more powerful computers have enabled banks to set up parallel institutions such as Teleservice within a practical timeframe. Teleservice pools the skills of computer and telephony integration specialist Datapoint, telecoms provider Mercury and IT supplier Unisys.

The project will cost tens of millions of pounds, but by a judicious marriage of telecoms and IT, TSB will acquire a new banking structure without the overheads of a physical branch network. Teleservice will follow in the steps of Midland Bank's First Direct operation. Technology is the enabler, but public interest is the motivator. Banks are finally taking a firm grip on the *IT toolbox*.



In the financial world, information technology was once seen as a barrier, due to cost. Now it is a gateway, an enabler rather than an inhibitor. Picture: Lydia van der Meer

# Big potential for multimedia

*Continued from previous page*

sultancy Ovum. She believes that between 1996 and the end of 1998, revenues from pcs equipped for video will exceed those from conventional videoconferencing equipment.

Suppliers are also upbeat about the potential market. An increasing number have developed desktop video-conferencing products. They include Canada-based Northern Telecom (with the Visit system distributed by UK computer dealers P&P); Intel, the US semiconductor company; AT&T; BT and IBM (with Coco); Apple (in the US); and Olivetti.

Many of these products allow people engaged in a video-conference to point to or edit information they can both see on their screens. Intel says that with its system, users at far-flung sites can edit a report together, both looking at the same version on their screens.

The system is modular and it is possible for US users to buy the ProShare shared editing software for $99 without the full videoconferencing kit (which costs $1,200 to $2,500). Intel is spending $100m (£67m) a year on what it calls personal conferencing technology. Its multimedia kits will go on sale in Europe this year.

To use one of its kits, the user must have a pc based on a powerful microprocessor (486DX or Pentium) and must install an ISDN (Integrated Services Digital Network) telephone line. Most other desktop videoconferencing systems are also designed to work with ISDN, a high-speed digital dial-up service.

Simon Goodwin, of AT&T Global Information Solutions, expects the multimedia market to be worth $900m by the end of 1995. He believes that growth will be fuelled by three factors: falling prices for multimedia components; the acceptance and roll-out of Euro-ISDN, replacing proprietary national ISDN communication; and the combined efforts of important European industrial participators in exploring new opportunities and requirements for videoconferencing products.

■ **Point-of-sale promotions:** Another potential growth area for multimedia is in point-of-sale (POS) devices. These can be used not only to promote products but also to collect information about customer preferences.

Many POS devices developed so far are linked into ISDN, so that they can relay customer orders back to head office or be updated with the latest product and price information.

Examples include:

● An interactive point-of-sales terminal which Ford plans to use in its car showrooms to enable customers to see the car of their choice in the colour and configuration they want – for example, four doors, spoilers.

● A system which helps a customer to choose a hairstyle from a database of 4,000 styles. Hairstyles can be superimposed on to a video image of the customer's face to see how he/she would look. (Although the system is used by only 18 Belgian hairdressers, Comsys of Belgium, its developers, is undeterred, and has crossed the channel in search of UK business.)

● A point-of sale terminal for a big music retailer. This system, developed by Applied Interactive Marketing (AIM) of Piccadilly Circus, London, allows customers to sample albums which are to be released in the next few months (by selecting a track and a seeing a video clip of the singer). Customers can operate the terminal using touch-screen commands, and indicate which releases they are interested in buying.

AIM says that developing a multimedia POS system can take as little as three to four months or up to a year and a half. Costs of developing a system range from £15,000 to £200,000.

Multimedia at the point of sale has a lot to offer. However, 24 multimedia POS kiosks based in London's Heathrow airport illustrate the main problem with the technology: most people are unfamiliar with multimedia terminals/kiosks and are hesitant to try them out.

The colourful Galleria 21 Heathrow kiosks, designed by the John Herbert Partnership (which was involved in the interior design of Terminal 4), use AT&T's multimedia technology. At first, people spotted the kiosks and wondered what they were for. Most people did not know – so they did not use them. Now the kiosks have been clearly labelled "Tax free shopping" and AT&T says usage has increased. They allow travellers to use a touch-sensitive screen to order goods via credit card.

The terminal works out how much the goods will cost, based on factors such as which currency is being used in payment, delivery charge, and whether any duty is payable. The goods thus ordered can be delivered to any destination in the world within seven working days.

The tale of the 24 kiosks shows that a multimedia screen has only limited powers of attraction. In order to reach a wider audience, multimedia products must demonstrate clear benefits.

☐ *Joia Shillingford is associate editor of the Financial Times newsletter, Business Computing Brief*

■ THE ELECTRONIC OFFICE

# The paperless office pays off for structured tasks

**The paperless office is as far off as ever for what might be termed wide-ranging jobs. But for highly structured tasks, such as handling insurance claims or invoices, cutting down on paper can lead to substantial gains in productivity, writes Joia Shillingford**

A number of new technologies make it possible for modern offices to cut back on paperwork – they include image processing (which converts paper documents into electronic images), workflow (which controls the flow of work between a group of workers), electronic mail and electronic data interchange.

□ **Image processing and workflow:**

At General Accident's 1-2-1 division, which sells insurance directly to the public, a £1.5 million AT&T GIS image processing system has speeded up claims processing and increased productivity by 20 to 30 per cent.

Bob Thomson, personal lines operations manager for General Accident, says: "We're working in a very competitive environment and wanted to make significant savings. A lot of resources were going into filing and looking for paper, and we wanted all documents to be accessible from a single source."

Now the 1,000 to 1,500 items that arrive in the post every day are scanned into the image processing system and assembled into electronic files, which can be viewed on a computer. 1-2-1's 54 staff (who spend most of the time on the phone) thus have everything they need to work on a claim on screen, without having to get up and look for files.

Image processing and workflow software are also being used at the UK offices of US oil company, Amerada Hess. They have enabled the company to process higher volumes of invoices without increasing the number of accounts staff. Amerada Hess' system, developed in conjunction with US image processing company Filenet, scans every paper invoice into a computer system.

If the invoice is straightforward and the goods have been received and match the original purchase order, the bill is paid. If it needs to be verified by an engineer or a senior accountant, it is sent to their computer screens electronically via Digital Equipment's Teamlinks package.

Once approved the invoice is automatically sent to the general ledger department for a cheque to be issued. The system is faster and more efficient than the old system in which all accounting information was typed in to the computer from a paper invoice, and sometimes added to by an engineer or accountant, and it now takes only minutes to locate one of the 50,000 invoices Amerada receives each year, rather than a day or longer.

□ **Electronic mail**

However, image processing and workflow are not the only route to reducing paper. David Ferris, a British-born but US-based electronic mail (e-mail) consultant says that use of e-mail can cut back on paper and give huge gains in productivity.

He says that these gains will not necessarily come from interpersonal messaging of the "Are you free for lunch on Friday" variety, but rather from the use of 'mail-enabled' applications, where an application such as word processing or electronic forms has an e-mail option built in. Mr Ferris says: "Automating simple business forms, such as expenses, can cut a company's costs by between one and two per cent of revenues."

City of London dealers: high-speed financial transactions are almost entirely completed on-screen and by phone

For example, time sheets created using JetForm software and sent via Lotus Development's cc:Mail or Microsoft Mail, save California-based diskette-maker and CD-ROM duplicator, Trace $270 a year per employee. The system costs $44 a year per employee, giving a financial return of more than 400 per cent a year.

E-mail can also provide other, less measurable benefits, such as improved decision making, better communication across time zones, more up-to-date market information, faster reactions to unexpected events, and shorter product-development times from geographically dispersed teams. E-mail can be used on all sorts of computer, but the fastest growing area of the market is e-mail for local-area networks of PCs.

Another growth area is e-mail for executives who spend a lot of time out of the office. One of the latest products designed for mobile e-mail users is Lotus' cc:Mail Remote for Windows. This allows executives to exchange messages with their in-house Lan e-mail system and keep in touch with what is going on back at base. Larry Crume, vice president of messaging at Lotus, predicts that it will be the company's biggest selling product this year and could hit sales of a million copies.

□ **Electronic data interchange:**

At present, many large companies use e-mail primarily for internal communications. By contrast, electronic data interchange (EDI) is used mainly for inter-company communications, where cutting out paper can significantly speed up the processing and transmission of information. (EDI or paperless trading is the name given to the exchange of structured business documents, such as orders and invoices, directly between computers.)

For example, a sales management system underpinned by GE Information Service's public EDI network, helped to cut the time it took for US orders to arrive at Benetton's Italian clothing factories from three-to-ten days to just hours.

Use of EDI is expanding. In Britain, 8,400 companies have adopted it and new types of paperless EDI message are being developed all the time. For example, a UK EDI standard for utility bills has been developed and is waiting for European endorsement, and despatch and binding messages are being developed for users in printing and publishing.

But large scale users of EDI have one big problem – how to communicate with even very small suppliers or customers via EDI.

One solution is to use what is known as hybrid EDI where those who aren't equipped to receive EDI documents electronically receive them on paper. A number of options are available including BT's EDI-to-fax service for its EDI*Net customers and the Royal Mail's Edipost (EDI-to-post). Here, EDI messages are sent to the Royal Mail's electronic data centre and then converted to paper for delivery by post. Recipients can phone back their responses, which in turn will be converted into EDI messages.

□ **Barriers to the paperless office**

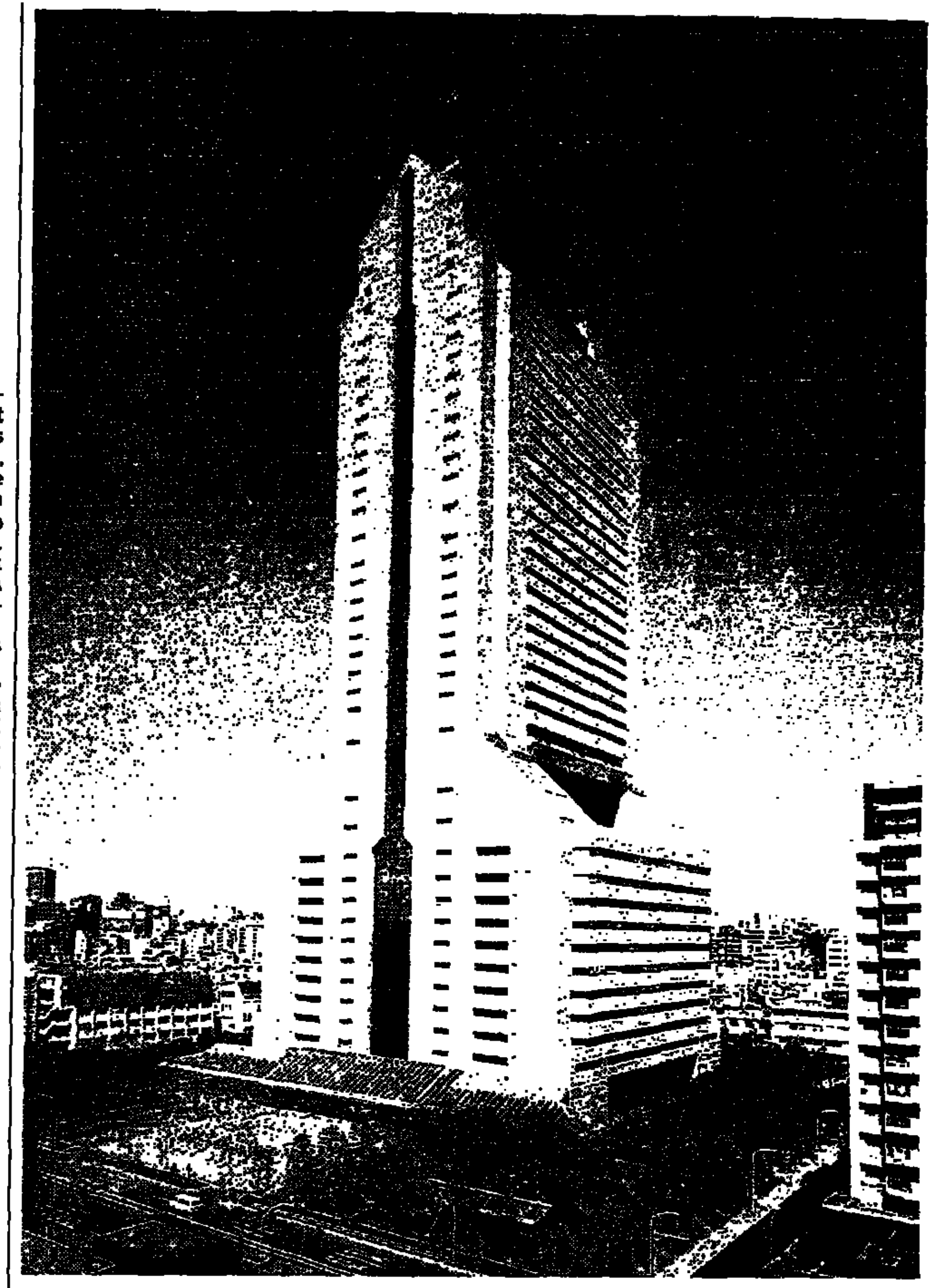
Hybrid EDI is a sensible compromise but it underlines just how difficult it is to get rid of paper when paper is accessible to every business from the corner shop to the multinational.

Another problem is that electronic images of paper documents are not legally admissible in court, even though they can include signatures, and are difficult to alter.

For example, Amerada Hess files copies of its paper invoices, in case its auditors, consortia partners or the VAT office want to see them, and General Accident is keeping paper records of documents scanned into its imaging system on site for six months before deciding what to do with them. Jeff Goldberg, an analyst at researchers Dataquest, says: "The promised paperless office has become the 'paperfull' office, partly because computers have not yet achieved the readability, or portability, of paper."

This is good news for printer companies – "more and more data is being stored on computers and people want to output it in a variety of ways," says Kevin Spinks, printer business manager at printer company, Lexmark. "This creates more and more paper and the demand for printers is growing at 15 to 20 per cent a year. I can't see the paperless office taking off this century."

*Joia Shillingford is editor of the Financial Times newsletter, Business Computing Brief*



## NEC's Super Tower sets the pace

The Tokyo headquarters of NEC, the electronics company, has one of the world's most advanced commercial communications systems, **writes Michael Wiltshire.**

Built on the site where NEC first began operations in 1899, the 43-storey Super Tower, pictured above, features the NEC's Super Aladdin system for total office automation. This includes electronic mail, electronic statement and receipt systems for the collection and distribution of documents, an electronic bulletin board, closed circuit and satellite television services which links NEC's three north American subsidiaries – NEC America, NEC Electronics and NEC Technologies.

Other features used by the 6,000 staff of the Super Tower include electronic telephone notebooks which contain the 35,000 telephone numbers within the company. There are also automatic message services on telephone terminals.

Office facilities of the Super Tower also include electronic secretarial services for setting up schedules and monitoring business progress. Staff work to a flexitime system - "this seeks to encourage the self-esteem of company employees by giving them more control and responsibility over their working time," says NEC.

Customers may one day don headsets for a 'virtual reality' armchair walk around their favourite stores, writes **Neil Buckley**

# A whole new shopping experience

Imagine, 20 years from now, a couple want to hold a dinner party but cannot decide what to cook.

They reach for a handset and call up some ideas from an electronic recipe book on the high definition video screen in their living room. Unsure whether one particular dish might be too difficult, they press a button for a video recording of a chef showing how to prepare the meal step-by-step

Satisfied they can manage, they move on to the wine. Further clicks on the remote control call up video recordings of winemakers wandering around their vineyards, talking about their wines.

The choices made, the couple transmit an order via the handset to their favourite food retailer. A few hours later, the ingredients and wine will be delivered to a special hatch at their home. They may even be delivered at the same time as the couple's regular, weekly shopping order.

Such a vision remains a fantasy. But retailers believe it could be a reality, even a commonplace, by early in the next century. What will make it possible is the conjunction of multi-media technology, allowing sound, pictures, graphics and text to come together on one screen, with fibre-optic technology, enabling huge amounts of information to be sent at high speed to and from consumers' homes.

Technological advances in the past 20 years have revolutionised the way retailers run their businesses, producing huge gains in operating efficiency, but they have not fundamentally changed the shopping experience. In the next 20 years, however, technology could revolutionise shopping itself.

Armchair shopping: technical trials are under way in the western world for new services which promise to create a revolution in 'home shopping.' These facilities bring together the telephone and television set to enable customers to choose and order entertainment and information services via an ordinary TV set.

It will change the view of shops as simply repositories for goods to be sold to the public. It is also likely to break down the barriers between shopping, recreation, and even education.

The biggest growth area is expected to be TV shopping - already booming in the US. The cable home shopping industry there - dominated by Home Shopping Network and QVC (Quality, Value, Convenience) - where customers watch a succession of products on screen and order by telephone, generated turnover of $2.3bn last year. So-called "infomercials", advertisements used to sell products directly to the public, pulled in a further $700m. On-line computer shopping services, in their infancy but expected to mushroom, generated $200m.

Coopers & Lybrand, which has just completed a year-long, $1.2m survey with sponsors NCR, Telxon and Citicorp into Retailing in the 21st century, says that as the number of available cable channels increases, conventional shopping channels are expected to proliferate, probably targeted at increasingly narrow age and interest groups.

Established retailers are already seizing upon TV shopping as a potent selling force. Macy's, the US department store group, is launching a shopping channel later this year.

The next stage, as more sophisticated communication networks are developed, could be the grouping together of information providers, network operators and transaction companies. That would enable customers to select purchases and transmit orders to retailers via a remote control, as described above.

An essential part of the growth of such channels is likely to be fast, secure delivery of products to consumers' homes, posing new challenges for retailers.

However, shops as physical entities will not die out. Many consumers will always want the opportunity to examine or try on products before they purchase. Convenience stores for top-up and impulse purchases are likely to remain indispensable - although they may become more specialised.

But stores will have to ensure they provide a "value-added" shopping experience and come up with new attractions to lure shoppers away from their TV screens.

Technological advances are expected soon to make shopping, especially grocery shopping, less onerous. One way will be to end queues at checkouts by developing shopping trolleys that scan purchases as customers make them and automatically deduct the cost from their credit or charge card.

Symbol Technologies and Videocard have already developed a trolley with a blanket of laser beams across the top which can read barcodes of goods being put into the trolley, from any angle. The trolleys are being trialled in the Netherlands.

The next step may be using silicon chips or tags which can be read by a radio beam on the trolley. A prototype system has been developed by the South African Council for Scientific

Continued on next page

**Information and communications technology 6**

**Philip Manchester** looks at network developments and the business benefits of client-server systems

# Computer industry in transition

**The seismic trauma that has rocked the computer industry in the early 1990s is not just the result of a recession – it is the result of a fundamental shift in technology**

The computer industry fared well in previous recessions because companies turned to automation to save costs and cut staff. But in the early 1990s it was different. Former giants of the industry – such as IBM and DEC – tottered alarmingly and have yet to prove they will survive the upheaval.

The main cause is the transition from centralized, mainframe-based computing to distributed client-server-based computing.

In many ways the transition reflects a wider change which is taking place in industry generally; local autonomy from the distribution of computer power and management responsibility.

Technologically, this change manifests itself in client-server systems – an approach to distributed computing which separates users (clients) and the services they use (servers).

Client-server computing has its origins in database management systems (DBMS) and the trend to separate the software used to access data from the software used to manage it.

During the 1980s, developers created a new model for DBMS which allowed these two components to be distributed across computers on a network. The front-end tools – data query languages and local applications – became known as 'clients' and the back-end DBMS 'engines' became known as servers.

Database vendors such as Oracle, Ingres, Sybase and Gupta use this approach in their products with the result that they can all communicate with each other.

A front-end tool from Gupta, for example, can use a back-end DBMS engine from Oracle without the user ever being aware of the location of the data.

Client-server computing extends this idea across the whole system and breaks down functions according to their role either as a client or a server.

In addition to DBMS servers, a modern network will have servers to handle printing, communications, mass storage back up and so on.

This approach can bring many benefits. It allows users greater freedom in their choice of hardware and software – with consequent cost-savings. It makes systems more flexible and provides for better integration of different types of systems.

"We have to tie the benefits to the business and I think client-server does this in four ways," says Mr Lawrence Hunt, director of distributed processing at the UK software company ACT.

"Firstly, client-server is much more flexible than traditional mainframe systems. If you want to get data for management information systems, this is difficult with closed mainframes.

"Secondly, it lets you integrate application more easily. You can integrate a PC-based spreadsheet into a mainframe database much more easily with a client-server approach.

"Thirdly, client-server systems give much more independence from vendors. All business want to future-proof their investment in applications software, which probably represents 80 per cent of the cost of a system. Client-server enables you to do this effectively.

"Finally, client-server systems can cut costs. We were recently installed a client-server system at a large investment bank.The costs came to about £1.5m. It would have cost £3m if we'd had to use a traditional approach with mainframes," says Mr Hunt.

Other financial institutions have also opted for the client-server approach in a big way. The Nationwide Building Society, for example, has standardised on Microsoft's Windows NT operating system as the lynchpin for a client-server system which will support 10,000 personal computer users over the next three years. It is also looking into the possibility of plugging its Automatic Teller Machine network into the new system with Windows NT as the controlling software.

National Westminster Bank has also adopted Windows NT as the basis for its client-server developments.

Most organisations are adopting a cautious approach to the transition from traditional centralized computer to client-server systems, however.

Paymaster, formerly the Paymaster General's Office, is typical – "we are introducing client-server slowly – function by function. We have started with electronic mail and access to shared spreadsheet and are moving on to introducing more function on desktop PCS," says Mr Derick Harbottle, director of information technology at Paymaster.

After many years of relying on an ICL mainframe computer to do everything, Paymaster has embarked on an ambitious plan to integrate up to 800 users into a three-layer client-server system using hardware from Olivetti and software from Novell and Oracle.

The ICL mainframe will eventually become no more than a database server.

"We have a heritage of 'legacy' systems on mainframes and we had to see if it was practical to move away from the mainframe. After a rigorous right-sizing study to see if it was feasible, we opted for a staged approach with a pilot project to start," says Mr Harbottle. Paymaster's move to client-server is the result of the same commercial pressure faced by business. Following changes in the UK government's approach to public services and the introduction of market testing, Paymaster has had to become aware of the service it offers it customers.

"We have made the change for sound business reasons. We are forward-looking company and need do more than sit back and let things just happen," says Mr Harbottle.

He goes on to emphasise that client-server should not be seen as a technology solution - but a business solution which brings greater flexibility to building information systems. He is also wary of expecting too much in the way of cost savings – "some people are talking about the technical issues or the cost-saving issues. We prefer to concentrate on the business benefits which will come from client-server," he explains.

Client-server systems allow users to integrate applications moreeasily and have proved to be far more flexible than mainframe systems

Any move to a new technology is bound to cause new problems and the transition to client-server systems is no exception. Paymaster's cautious approach – with carefully phased introduction of the new system alongside the old, is an object lesson in how to move to client-server with the minimum amount of pain.

"We try to avoid being at the bleeding edge of technology. Rather than inventing our own, we would rather steel other people's wheels," observes Mr Harbottle.



■ NETWORK CAPACITY

# Users pin hopes on ATM

**Demand for space on computer networks keeps exceeding supply, writes George Black**

The largest corporation will probably be the first to take up 'ATM-ready' local area networks to communicate image, voice and data

The present structures of local area networks of personal computers, Ethernet and Token Ring, running at 10 megabits and 16 megabits per second respectively, will soon be unable to cope with the growing volume of traffic.

As users compete for communications channels, the actual speed of delivery to each of them is often only a tenth of the network's theoretical capacity. When more users come on to the network, its performance degrades.

Network managers have responded to the rising demand by exploiting existing systems more efficiently. This is one of the main reasons for the enormous growth in sales of devices such as intelligent hubs, bridges and routers in the past couple of years. They have helped a lot, but it will not be enough.

Fibre Distributed Data Interface, running at 100MBps, has been regarded by many as the probable solution, but it has so far proved too expensive. FDDI and Fast Ethernet, also running at 100MBps, may be overtaken by ATM (Asynchronous Transfer Mode).

Experts now agree that ATM is the only technology that can give the necessary transmission speed for communicating image, voice and data together in real time at an acceptable price. It can use existing wiring, which will help keep down the cost. It may therefore be what is needed to start the long- expected spread of multimedia applications.

Ethernet and Token Ring have suffered from a lack of standards, which has meant a large amount of conversion of data from one format to another. The move to ATM, which is rapidly becoming standardised, may be equivalent to removing official frontier controls.

Unlike its predecessors, ATM uses a technology known as cell relay, which takes advantage of the high speed transmission capacity of fibre optic cables. It handles data in fixed length cells rather than variable length packets, which is thought to be more efficient. This should push the speed of transmission up to a maximum of around 2.4 gigabits per second.

For backbone systems in office and factory buildings, 155MBps is expected to be the usual speed; 45MBps may be typical for combined data, voice and video. ATM will not put upper or lower limits on the transmission speed but use that which is appropriate to the application.

Other important advantages of ATM are that it is a much simpler system than the older ones and can be used for both local area and wide area networks, which should further reduce migration costs and ease the task of network management.

ATM was invented to serve the needs of the public telephone companies, but was soon taken over by the pioneering computer companies of California's Silicon Valley.

The ATM Forum, which was set up by the computer companies in 1991 and now has over 200 members, comes out with a new standard every couple of months and is rapidly completing the set which is needed.

It is setting a pace which the telephone companies cannot match. Mr Tim Ward, strategic marketing director for Network Equipment Technologies (NET), a leading company in the forum, admits that there has been a lot of "hype" for ATM but argues that it was necessary.

"It has turned people's attention to ATM as a local area network technology," he says.

"ATM-ready" LAN products began to come on to the market in 1992. ATM on LANs is forecast to prove a more cost-effective solution than on WANs or on the public carriers' services. So it is likely to be adopted for LANs long before the telephone companies have worked out the details of their offerings.

The largest corporations will probably be the first to take up the technology. Banks want it in their dealing rooms, where video and news agency reports may be joined on a single fibre optic feed.

Users are only experimenting with it at the moment; live applications will follow in a year or two. Many of the telephone companies worldwide will introduce their first ATM services this year.

According to Mr Sean Phelan, principal analyst for market research firm Yankee Group Europe, pricing presents them with a dilemma. "If they price it too low they risk cannibalising their current revenues, but if they price it too high the uptake will be very small," he says.

"The arrival of ATM therefore represents a big opportunity for new entrants into the telecommunications business." For most users the big question is when they should try to move to ATM.

A report last year by the Ovum consultancy said that potential users of ATM, especially in Europe, were cynical about it, partly because current ATM products did not match their expectations. Ovum said that ATM provided far more than enough bandwidth but added that this did not translate into the functionality required.

One of the authors of the report, Mr Iain Stevenson, says that their cynicism may be dispelled by a number of new products from hub and router vendors which will be delivered this year. He notes the telephone companies are worried that ATM may leave them "holding the string" for users who have equipment on their premises which is intelligent enough for them to manage their own networks.

"The telephone companies have to get closer to their customers to find out what services they really want," he says.

One of the technical concerns about ATM has been that receiving devices may not be able to cope with the throughput. Data cells could get lost in the pipeline and need to be resent.

"With only a small disruption an encyclopedia could have gone by," notes Mr Jim Boyle, vice-president of wide area networking for IBM. IBM has stated that ATM is one of its key technology strategies and it is investing heavily in research into network congestion. The design of ATM networks will be difficult, at least until flow control software matures.

Users may therefore be wise to hire systems integrators to build these networks for them.

**European contracts for Asynchronous Transfer Mode-based public switches**

| Country | Operator | Domestic | International |
|---|---|---|---|
| Belgium | Belgacom | Alcatel | Alcatel |
| Denmark | Tele Danmark | Alcatel | Siemens |
| Finland | Telecom Finland | ++ | Netcomm |
| France | France Telecom | Alcatel | Alcatel |
| Germany | Deutsche Telekom | Ericsson | Alcatel |
| Ireland | Telecom Eireann | ++ | Alcatel |
| Italy | Sip+ | Alcatel, Ericsson | - |
| | Iritel * | - | Alcatel |
| Netherlands | PTT Telecom Netherlands | AT&T | AT&T |
| Norway | Norwegian Telecom | ++ | Alcatel |
| Portugal | TPL+ | Alcatel | - |
| Spain | Telefonica | AT&T Ericsson | Alcatel |
| Sweden | Telia | AT&T Ericsson | AT&T |
| Switzerland | Swiss PTT Telecom | Siemens | Siemens |
| UK | BT | AT&T | Alcatel |

Footnote: + indicates purely domestic operator; *purely international operator; ++ contracts have yet to be awarded; listed international contracts all involve switches for the pan-European ATM trial; source: Financial Times Telecom Markets newsletter

# Electronic shoppers will be spoiled for choice

Continued from previous page

and Industrial Research in conjunction with the British Technology Group.

Eventually, however, customers may not need to put goods into trolleys themselves. Supermarkets – and other stores – may display just one example of each product. Customers will walk around the shop and wave a wand across a bar code on the shelf to order and pay for a product. Their order will be assembled behind the scenes by staff.

Surplus selling space might be used instead for cooking classes and demonstrations, or multi-media kiosks offering information.

For those who do not insist on seeing or handling every item, the process could be taken further. Why walk around a supermarket when you could be, say, enjoying a meal in a restaurant, making selections from an electronic shopping catalogue and picking up your order when you have finished your coffee?

As well as making shopping more enjoyable, advances in information and communications technology will give customers more choice and control. Stores may no longer stock products, but instead offer customers the opportunity, assisted by knowledgeable staff or consultants, to customise or even design their own merchandise – for example to choose the colour, fabric and precise size they want items of clothing to be made in, with the order transmitted instantaneously to a factory and the finished product despatched the same day.

In the US, the Blockbuster retail chain in a venture with IBM is allowing customers to select tracks for and record their own compact discs on the spot.

Japan is experimenting with mobile production units in trucks or vans for goods such as spectacles and contact lenses, which take orders by telephone and deliver products rapidly to a customer's home or workplace.

Themed and 'experiential' stores, such as those operated by Disney and Warner Brothers, are also expected to increase, using technology such as virtual reality to sell goods.

In the long run, customers may not stare at video screens at home, but instead – a prospect that still sounds like science fiction – don headsets that allow them to wander around virtual reality stores, or even virtual shopping malls.

Developments in virtual reality systems: page 17

■ THE BIG TELECOM OPERATORS

# A global scramble for partners

**The emergence of global service providers able to meet the needs of multinational corporations is being slowed by a range of cultural and technical problems, writes Mark Newman**

Telecommunications giants are stumbling towards global alliances which will bring down national barriers and sideline second-division telephone companies.

The telecommunications big boys say alliances are a response to the communications needs of multinational corporations, but, at times, it seems as though the customers are the sideshow, and the main event is a showdown between telephone operators determined to outmanoeuvre each other.

BT carries much of the responsibility for the high levels of activity among the world's largest telephone operators over the last three years. It tried to set up an exclusive partnership with Deutsche Telekom and Nippon Telephone and Telegraph in 1991. This fell apart after Deutsche Telekom insisted on including its French allies, NTT got cold feet, and both the Japanese and the Europeans realised that their competition authorities might not think a joint venture company intent on exercising global competitive strength was a good idea.

In fairness to BT, it saw a market emerging for the provision of global communications services, and this has been the motivation behind its attempts to put together worldwide alliances. Many other companies, despite their claims, would be happy to keep the status quo and to exclude BT from their markets.

In India, a bored attendant is pictured amid rows of phones during a strike on the Bombay Stock Exchange. Western telecom giants have sets their eyes on vast Asian markets. India has about 7m telephones, but just to provide one line for every ten of its 200m middle-class people would mean installing an extra 13m lines. In China, there are plans to increase the number of lines five-fold to 100m lines by the year 2,000 Picture: Reuter

Events have moved on since 1991: BT has taken a 20-per-cent stake in MCI, the second largest US long-distance telephone company, and the two companies are setting up a new company dedicated exclusively to selling services to multinational corporations; France Telecom and Deutsche Telekom have set up a joint venture company of their own; three second-tier European telephone operators, PTT Telecom Netherlands, Telia of Sweden, and Switzerland's PTT Telecom have set up a venture called Unisource; and American Telephone and Telegraph has also announced a world strategy of its own.

Brokers in the global power game will emerge from these four groupings, but the next few years will see a jockeying for position among the global communications protagonists and the expansion of existing partnerships.

Other telecommunications companies waiting on the sidelines are US long-distance operator, Sprint, Japanese operators, KDI and NTT, Cable & Wireless, Spain's Telefonica and Telecom Italia, the group that will emerge from the restructuring of Italy's telecommunications services sector, but they will face a number of obstacles along the way which will slow the progress of global partnerships. The main ones are:

□ **US partners:** most multinational corporations are headquartered in the US. The idea of a global communications company is that it can deliver services in all of those countries where multinational companies have offices.

A presence in the US, therefore, is vital. Two of the groupings, Unisource and France Telecom/Deutsche Telekom need US partners. AT&T, MCI and Sprint are the three obvious candidates for anyone in search of a US partner.

MCI has already thrown in its lot with BT, so this only leaves AT&T and Sprint. France Telecom and Deutsche Telekom were in serious discussions with AT&T last year with a view to an alliance that would have involved a pooling of international telecommunications activities in a new company but Project Atlantic has broken down following suggestions from the competition authorities in Brussels that it would fall foul of rules on mergers. A less-ambitious alliance is now under discussion, but this may not satisfy the ambitions of AT&T.

Unisource appeared to be lining up Sprint two years ago when the two sides agreed to interconnect their data communications networks, but the agreement was terminated at the end of last year after Unisource lost one of its first customers, Swedish conglomerate, SKF Group, because of problems with the interconnection of the two networks.

□ **Systems integration:** telecommunications networks are constructed in different ways and by different manufacturers. When SKF Group cancelled its contract with Unisource, it cited the failure of Unisource and Sprint to provide seamless network integration.

Systems integration will be one of the main tasks facing BT and MCI when they construct a global network platform. Customers in the US will connect on to MCI's network, while BT is installing network facilities in Europe.

□ **Old friends:** partnerships already exist between international telephone operators. When a UK company orders an international private circuit from BT, for example, from London to Paris, BT has to liaise with France Telecom for the half-circuit on the French side. Similarly, international telephone operators have to pay each other for delivering calls to their customers.

Accounts are settled according to the international settlements procedure. Complications arise when a country has more than one international operator. For example, the UK has BT and Mercury, while the US has three large international carriers, AT&T, MCI and Sprint.

In this case, BT would divide its international outgoing traffic between the US operators according to the market share of the three operators for international calls from the US.

AT&T has roughly 60 per cent of the US long-distance market, so it receives 60 per cent of all incoming calls. This business is highly lucrative as the settlements procedure sets prices at above cost. If AT&T was to side against large international operators, it could threaten existing relationships.

This explains why AT&T says it would prefer to offer global services in partnership with state-owned telephone companies rather than in competition with them.

□ **Regulation:** few countries allow competition with state-owned telephone operators in basic voice telephone services. In Europe, restrictions will not be removed until 1998, although many companies are already exploiting uncertainties about the rules for competition in services to closed user groups. Global alliances will also attract scrutiny from both national and regional governmental bodies.

BT's acquisition of a 20 per cent stake in MCI had to go before the the US State Department and Department of Justice, as well as the Federal Communications Commission, the telecommunications regulatory authority. It also needed clearance from the European Commission.

An alliance between AT&T, France Telecom and Deutshce Telekom would face even closer scrutiny, and is the main reason for the decision of the three operators to seek a less-ambitious alliance than was originally envisaged.

**Outsourcing:** global alliances are founded on the assumption that multinational corporations will, over the next few years, decide to outsource their telecommunications networks to third parties. But Mr Lenny Elefenbein, the managing director of US telecommunications consultancy, Lynx Technologies, notes that "while an impressive number of users have put out requests for information, very few have actually awarded their businesses to one of the carriers."

He says that even the large carriers have been confused by the high ratio of activity to closed deals and that several of them have commissioned internal studies to determine "why they they are not getting their share of the perceived big outsourcing bonanza."

□ **Cultures:** while MCI is an aggressive, marketing-driven company, BT is still making the transition from a government department nine years after its privatisation and ten years after the ending of its monopoly. Many observers question the ability of the two companies to work together effectively.

The problems will be even greater for other transatlantic partnerships. Other telephone companies in Europe are still under state-control and have not even begun to make the transition to commercially-run companies that BT started in the late 1980s.

There will be other problems along the way, many of them arising as global consortia threaten to take lucrative business contracts from state-owned telephone operators in smaller countries, leaving them only with the unprofitable residential customers.

A momentum has built up behind the formation of global alliances which will assure their emergence, but there will be problems along the way, and big businesses – in whose interests the alliances are being formed – will have to wait a little longer before operators deliver the services that match their global service claims.

*The writer, Mark Newman, is editor of the FT newsletter, Telecom Markets*

Cable and Wireless earth satellite station in Hong Kong. More than 65 per cent of the population now have telephones Picture: Hugh Routledge

**The world's ten largest telecommunications operators***

| Operator | Country | Revenue 1992 ($m) | % change 1991-92 | Lines (m) 1992 | % change 1991-92 |
|---|---|---|---|---|---|
| NTT † | Japan | 51,353 | 1.7 | 57 | 2.7 |
| AT&T** | US | 39,580. | 2.0 | n/a | n/a |
| DBP Telekom | Germany | 34,550 | 14.3 | 35 | 5.6 |
| BT † | UK | 23,379 | (0.7) | 26 | 1.9 |
| France Telecom | France | 23,164 | 5.9 | 30 | 3.4 |
| SIP | Italy | 17,492 | 10.8 | 24 | 2.8 |
| BellSouth | US | 15,202 | 5.2 | 19 | 3.4 |
| Nynex | US | 13,155 | (0.9) | 16 | 1.9 |
| GTE | US | 12,644 | 0.6 | 17 | 3.6 |
| Bell Atlantic | US | 12,093 | 2.5 | 18 | 2.4 |
| TOTAL | | 242,613 | 7.1 | 242 | 3.2 |

*Ranked by 1992 revenue; **AT&T does not offer local exchange line services; † indicates year ending March 31, 1993. Source: Financial Times Telecom Markets Newsletter*

■ TELECOM EQUIPMENT SUPPLIERS

# A tricky balancing act for leading vendors

There is substantial uncertainty in the international market for public telecommunications "which is characterised by lower investment and intensifying price competition particularly in the major industrialised countries" – this was the gloomy prognosis for telecom equipment suppliers, given by the Swedish manufacturer Ericsson, during its 1993 results meeting.

Five years ago this kind of outlook would have been deeply damaging for a company like Ericsson. In common with its rivals in Europe – Alcatel and Siemens – Ericsson placed a heavy reliance on the sale of switching equipment to state-owned telephone companies in western Europe.

But Ericsson's focus has changed over the last two to three years. Mobile communications is now its core business. And while Europe remains an important market for sales of switching equipment, Ericsson is increasingly tapping emerging markets such as India and China for new sales.

The telecom equipment market today is undergoing rapid change both in terms of the products that are manufactured and the markets where they are sold.

Big business users are demanding high-speed broadband services to send massive volumes of data backwards and forwards between their offices scattered across the world. Radio is becoming the cheaper than copper for access to long-distance networks. And the term 'multimedia' is causing panic among equipment vendors. They will undoubtedly play a role in building multimedia networks.

But software is the key to multimedia and if equipment vendors fail to reach alliances with software companies, they may be left behind. The leading equipment suppliers such as Alcatel, Siemens, American Telephone and Telegraph and Northern Telecom are still making public switches.

But most state-owned telephone companies in western Europe and North America are now reducing their investment levels. They have digitalised their long-distance networks and modernisation of local networks for low-spending residential customers is proceeding at a slower rate. Recession – first in North America and now in Europe – has also taken its toll.

Increasingly, switch suppliers are targetting the emerging Asian markets.

China is the biggest prize and its requirements are so immense that there is room for all suppliers. Ian Macleod, a telecommunications analyst at Natwest Sellier in Paris, calculates that in 1992, total line deliveries (switch orders are expressed in terms of the number of lines that can be connected) to China came to around four million.

He estimates that the figure doubled to eight million in 1993, and that by 1996, orders could be running at 12m lines a year. To raise telephone penetration to its planned level of 10 per cent by the end of the decade, China will have to buy 100m lines between 1992 and 2000.

India's expansion programme will require the installation of 18m lines over the same period. Major suppliers to Asia such as Alcatel and Ericsson are gradually moving manufacturing facilities into local markets. There are clear benefits to be had.

**Leading equipment suppliers are well-placed to benefit from emerging Asian markets growth, but they will have to get the balance right between selling old products into new markets, and bringing out new products for their older customers in the western world**

Production costs are lower than in Europe or North America. But this is not the prime motivating factor. In many cases, governments insist on local manufacture to provide jobs and prepare the way for indigenous production. Some governments in eastern Europe make the acquisition of local production facilities a pre-condition of contract awards. Otherwise, the local manufacturers which supplied the national telephone companies during the Cold War would inevitably face closure.

Stock market dealers in Hungary. Eastern Europe offers great scope for telecom equipment suppliers Picture: Paul O'Driscoll

But it would be a mistake to imagine that western manufacturers are packing their bags and heading east. Sales into developing markets are more of an expansion than a re-orientation.

The riches are still in Western Europe and North America, although the importance of public switching equipment is inevitably in decline. Alcatel, the world's largest telecom equipment manufacturer, still relies on Europe for 75 per cent of its sales.

Driven by a wave of liberalisation, the European telecommunications equipment market will undergo radical change over coming years. The cosy relationship between state-owned telephone companies and local manufacturers will be forced apart as new operators attack the lucrative international and business communications markets.

Closed markets will open as state-owned telephone companies begin to behave like proper commercially-run companies. And national champions such as Siemens and Alcatel will respond by selling their products to competitors to Deutsche Telekom and France Telekom.

The UK telecommunications market is already the most liberalised in the world.

Equipment manufacturers are widening their vision beyond BT and Mercury Communications, and are facing immense pressure from both the new operators and the incumbents to develop new technology that gives them a competitive edge.

New international and long-distance telephone networks are being built, wireless technology is being trialled for local telephone networks, and cable television operators are being allowed to offer telephone services.

The requirements of big business users are setting the agenda for equipment vendors. Coping with massive flows of data between sites has become a headache for today's telecommunications manager.

A surge in demand for the interconnection of local computer-based networks has led to the development of a fast packet-switching service for data communications called frame relay.

Equipment vendors are facing stiff competition in frame relay from smaller companies in the computer and networking sectors such as Cisco Systems, Raycom Systems and StrataCom.

A bigger battle is being fought for dominance in Asynchronous Transfer Mode (ATM), a technique for sharing the capacity of a telecoms channel between those wishing to use it. ATM enables telephone operators to offer high bandwidth services, such as high-speed data or video-conferencing, with improved efficiency and greater flexibility.

ATM is already being touted as the backbone for multimedia and other broadband services, and can be applied to both private and public networks. All leading equipment vendors are positioning themselves for a share of the ATM market. A group of 16 European operators in 15 countries is to conduct an ATM trial this year, and all have awarded ATM contracts.

Familiar names such as Alcatel, Siemens, American Telephone and Telegraph and Ericsson have won contracts along with Netcomm, a UK-based data switch manufacturer.

Ericsson has prospered as a leading telecommunications equipment manufacturer in a market which is undergoing rapid technological and where a number of its rivals are stumbling. Alcatel, Siemens and Northern Telecom all suffered profit setbacks in 1993.

They were hit by a fall in orders for public telecommunications equipment as a result of the recession in North America and Europe. Meanwhile, products based on ATM, and Synchronous Digital Hierarchy, its sister transmission technology, are only now emerging from the laboratory and operators are reluctant to commit themselves to major orders.

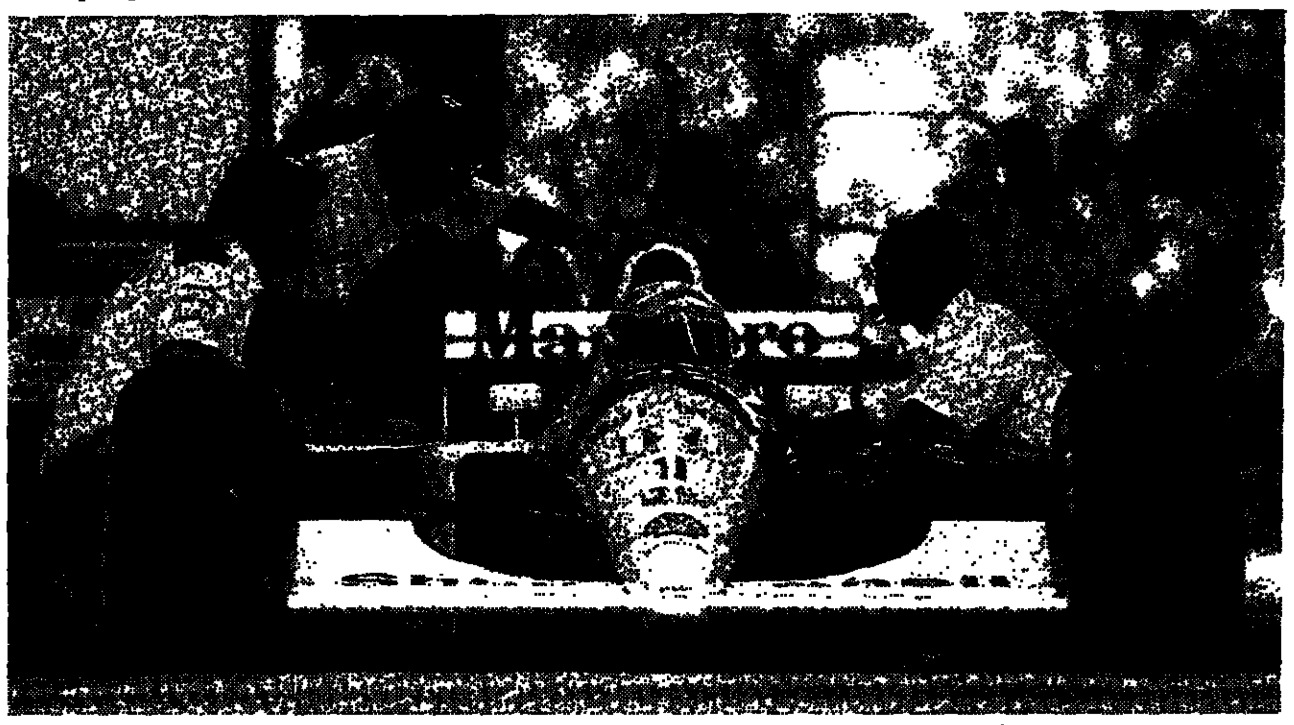
Lars Ramqvist, Ericsson's managing director, puts his company's strong financial performance in 1993 down to a strategy which meant spending 15 times more on R&D than on dividends.

In a speech at the 1994 Innovation Lecture in London last month, Ramqvist said manufacturers needed to forego short-term profit in favour of higher R&D spending.

Ian Macleod at Natwest Sellier is confident that the combination of liberalisation and new technologies "promises a new phase of growth in the world telecommunications equipment market."

Leading equipment vendors are best-placed to benefit from the growth. But they will have to get the balance right between selling old products into new markets, and bringing out new products for their older customers in Europe and North America.

**Mark Newman**



Fast track mobile communications: when a Mclaren Formula 1 driver needs to call in for a fresh set of tyres, he simple presses a button on his steering wheel. This allow him to talk to ground crews and pit mechanics over a sophisticated radio system, installed by the Kenwood Corporation for the Malboro Mclaren team. 'Hands-free' operation is ensured by a miniature microphone and speaker in the driver's helmet.



■ GLOBAL MOBILE COMMUNICATIONS

# Watchword for the future

**Paul Quigley** charts the rapid progress towards a mobile millenium in communications

"Mind the gap!" warns a familiar, faceless voice to travellers on the London Underground. This could well be the watchword for the future of global mobile communications as a radical revolution takes place.

The "gap" in this case is "globalisation and personalisation" – the main themes of the wireless age.

Few of us could have predicted the all-pervasive influence which personal computers would come to have in business and personal life over the last decade. Yet we are seeing the integration of voice, data, image, and communications in a natural evolution towards the multimedia workstation.

Similarly, emerging technologies in mobile communications have catapulted wireless, mobile and personal communications into one of the fastest growing markets in the world. The range of technologies becoming available is immense. Many people know about and use cellular telephones and radiopagers. Others are aware of mobile data and digital cordless technologies. Plans are well under way for future wireless and mobile communications systems which will obfuscate the demarcation lines between wireless and fixed telecommunications.

First generation cellular technologies – those in use today – are predominantly analogue systems such as AMPS (American Mobile Phone System), TACS (Total Access Communication System) and NMT (Nordic Mobile Telephone) systems.

Radiopaging has been dominated by the POCSAG (Post Office Code Standards Advisory Group) system. Second generation mobile technologies are now becoming commercially available, introducing digital architectures to mobile communications. These include GSM, CT2, DECT, CDMA and the lesser-known IS-54 and PDC.

The speed of developments in the mobile industry accelerates apace. For example, it took cellular phone manufacturers eight hours to make a cellular phone in 1988; 30 minutes in 1992. Today it takes a mere 12 minutes – and this is a telephone containing computer capacity of between 30m and 40m instructions per second, equivalent to the power of mainframes of only a few years ago.

GSM (Global System for Mobile Communications) is in the limelight around the world. Developed by the European Telecommunications Standards Institute (ETSI), the technical standards body, GSM is the first harmonised European standard to catch the imagination and the investment of users, operators, and manufacturers alike.

Cellnet Lifetime, the mobile phone service package from Cellnet, aims to make mobile phones affordable for domestic users.

GSM was developed as a pan-European digital cellular radio network architecture; it has evolved over more than 10 years into the standard we see today. Set to grow at an unprecedented rate over the next five years, GSM is already far more than merely a European standard. Already it has been adopted as the preferred choice of international mobile network operators in countries as diverse as Australia, New Zealand, Russia, South Africa, Hong Kong, China, India, Pakistan, and the Gulf states.

A report entitled "GSM – Going Global", by consultancy Nexus Market Analysis, forecasts that there will be 40m GSM users by the year 2002 in Europe alone. Driven by falling handset prices, competitive tariffs and wider network coverage, the market is growing at a phenomenal rate. The international roaming capability of GSM, coupled with the phase two supplementary service enhancements such as data communications and fax, is making GSM a serious contender as the benchmark for future global mobile systems.

DCS1800, a digital cellular standard based on the GSM specification for lower power handsets, points to the future in the wireless market. Operating in the 1.8 GHz band width, DCS1800 is intended for use as a mass market personal communications network, or PCN.

With a design philosophy quite distinct from its forbears, the key to the PCN market will be simplicity and ease of use. The target market for the "personal communicator" is you and me.

In the UK there are two licensed PCN operators. Germany has licensed one DCS1800 operator; so has Thailand. France is in the process of licensing a DCS1800 operator and others are sure to follow. There is growing speculation that US telecom regulators will grant Personal Communications Services (PCS) licences to operators touting DCS at 1900 MHz.

Cordless technologies such as CT2 (second generation digital cordless telephony) and DECT (Digital European Cordless Telecoms) are also reviving the industry. CT2 has recently experienced mixed fortunes around the world. The failure of CT2 as a public telepoint technology in the UK made many people think it was a dead-duck digital technology. However, mass uptake of CT2 in Hong Kong, France and elsewhere has forced a re-evaluation of its future. (The advent of the DECT standard may have somewhat dampened this, as DECT has found converts in the cordless PABX arena, the wireless local area network (WLAN) market and even in the wireless local loop market.)

In radiopaging, developments in memory capacity, functionality and coverage are vying to re-establish this elder statesman of mobile communications as a flexible and feature-rich medium.

"Wireless Messaging" is the term used by many people in the industry for radiopaging. ERMES (European Radio Messaging), the ETSI standard for digital paging, is taking longer than expected to launch. Third generation systems are already on the drawing board, with concepts such as "Future Public Land Mobile Telecommunications System" (FPLMTS), "Universal Mobile Telecommunications System" (UMTS) and "Universal Personal Telecommunications" (UPT) already well under development.

The backbone of these third generation systems will be Intelligent Networks (Ins) which will enable users to rely on the intelligence in the digital network to handle the mechanics and logistics of routeing, storing and forwarding of data.

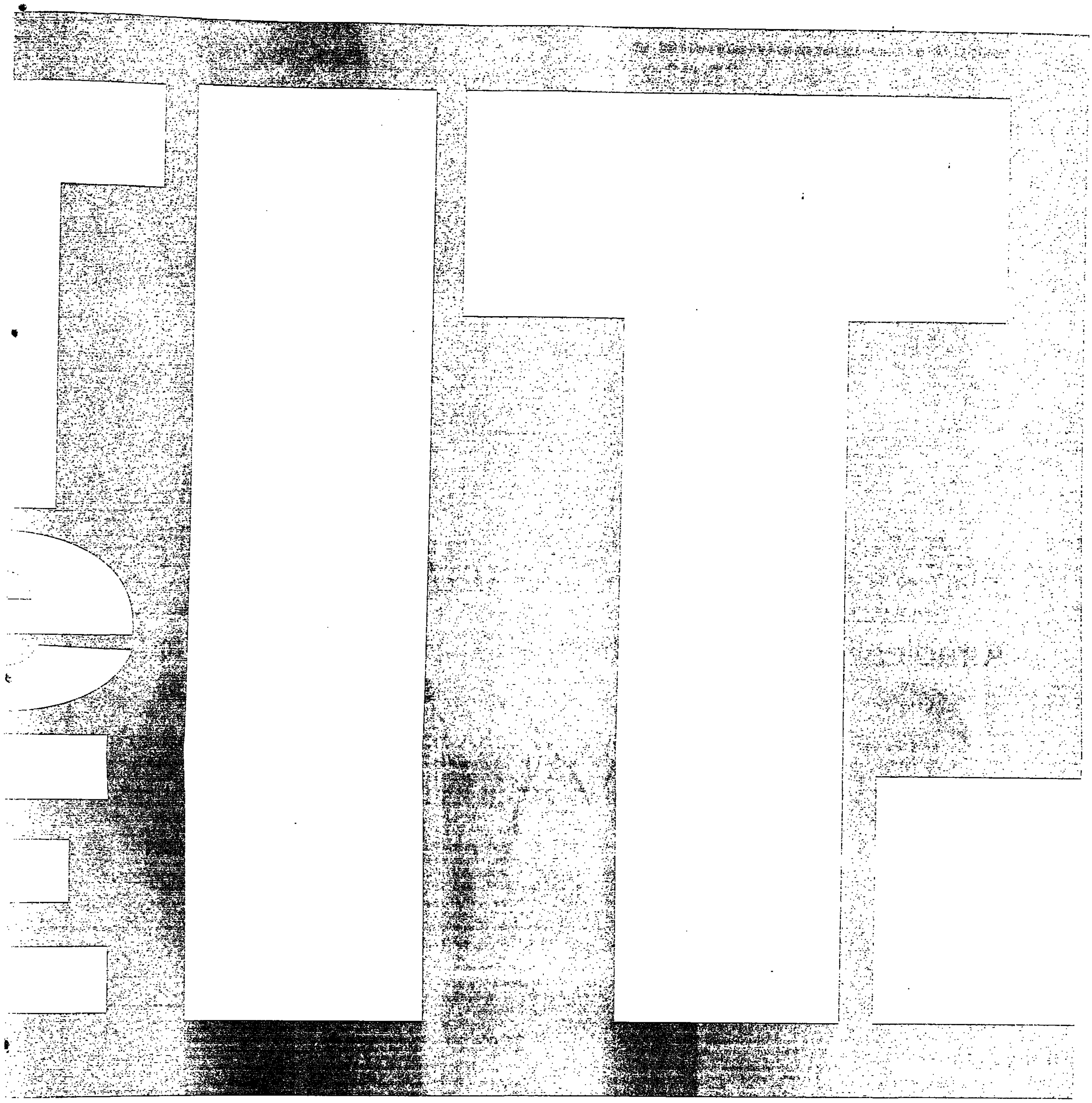
Competition in Europe and across the world has driven the market – competition not only in handsets and equipment manufacture, but especially between network operators. At a recent IBC conference on Pan-European Digital Cellular Radio in Athens, GSM was seen as the de facto global standard.

Yet, despite GSM's runaway international success, there is a continuing debate within the industry over the future air interface of digital cellular systems. GSM, DCS1800, DECT, and others use TDMA (Time Division Multiple Access), which breaks up speech channels into multiple time slots. Over the last few years the industry has been rocked by an alternative digital air interface: CDMA (Code Division Multiple Access), a spread-spectrum technology making better use of available frequencies.

As we hurtle headlong towards a new mobile millennium, a blurring of the edges in place-to-place and person-to-person communications will give rise to wholesale change. We're going global in a wireless world. Mind the gap! Stand clear of the doors, please!

Global Information Solutions

# GE
# move
# USE



■ FACILITIES MANAGEMENT

# A make-or-break factor

**In the term "computer services," emphasis is shifting away from computers and towards services. That is one reason why companies once dedicated to hardware or software are moving into facilities management, explains Claire Gooding**

The ability of a company to operate – or not – may depend on the management of its computer system. This can be the 'make-or-break' factor, especially as computers move close to the centre of business in areas such as manufacturing, customer service and sales, as well as the traditional accounting functions.

*On this premise both factions* on facilities management (FM) base their arguments. The faction "against" believes the computer system is so vital to the competitive strength of core activities that it would be madness to contract it out. Inside knowledge – expertise about computing, and the business – should stay that way.

The argument about being in the centre of things hands equal ammunition to those who promote FM. In a culture where compulsory competitive *tendering (CCT) is the norm*, there are economies of scale in an outside (or "outsourced") supplier providing the hardware, the software, and the expertise to support it.

CCT demands that every contract decision must involve those classic elements, "measure and deliver" – dear to the heart of IT professionals. You *can't deliver what you can't* measure. Furthermore, FM proponents argue that they are much better at knowing how much things should cost, where economies can be made, and delivering them, undistracted by the fluctuating concerns of core operations.

Coding, programming and the support of end users are *the central activities of an IT* department. The argument runs thus: how much better for

In-house IT staff are faced with increasing complexity of PC networks

individuals to be at the profit making centre of a company *whose business is supplying IT* services, than to be at the periphery of a company whose real *raison d'etre* is baking biscuits, making cars, or exploring for oil.

It has to be said, on both sides, that the margins in supplying computer hardware and even packaged software have dwindled. However, the long-accepted figure of "80 per cent of IT spending is on support and maintenance" stays constant. The tedium of arguing about who owns a problem (software, hardware, network?) has driven many a user-company into single-source-supplier agreements, and the idea of contracting out an entire IT department is simply a logical *step further in cost control*.

The result is a burgeoning market in "systems integration" and "facilities management" – new names for bun*dling activities, familiar since* the earliest days of computer services.

Systems integration is a broad church. It covers anything to do with development – including every sort of alliance of software and hardware involved in setting up new systems. *FM is the contracting* out of an entire task and its *maintenance – the contractors* take over the assets and the manpower necessary to the service.

The research company Dataquest estimates the value of the FM marketplace at more than $2,500m in Europe, growing by 20 per cent a year. This *explains* why some of the best-known names in the computer *industry are now turning to* FM as a core activity.

They include the big, traditional firms of accountants such as Andersen Consulting and Ernst and Young, and *names once identified with* manufacturing, rather than merely supporting computers. Unisys and Olivetti, for example, are among the companies which, once known for their proprietary hardware, have turned to supplying services and support for almost any sort of hardware and software, particularly the workstations and PCs termed "desktop services".

Nearly 1,000 of Olivetti UK's 1,400 employees are in the Customer Support Group, working for a *customer base largely* in the financial and retail sector. Unisys has recently signed up Bass Taverns, the UK's largest public house retailer, for an FM contract worth over £3.9m over three years. Its job is to support 2,500 pubs, developing and supporting Bass's Central *Retail System*.

In the UK, other users of Unisys' outsourcing services include McDonald's Restaurants. US users include the federal government, the Ford Motor Company, and Nasa.

Hoskyns is an active FM company, one of the UK's largest computer services companies, worth £200m, part of the *French-owned Cap Gemeni* Sogeti Group. UK customers include Woolworths, Bristol Water, and Hoover – "outsourcing is still the fastest-growing sector of the IT services market. Analysts estimate that the European market will double by 1998 to a value of £4bn," *says Peter Falconer, Hoskyns'* associate director.

*Falconer is looking to the* European market to expand. Five recent contracts for Hoskyns' Scandinavian sister company, adding up to £17m worth in all, underline the ambition. "The pace at which FM is *adopted will differ country by* country," he says. "CGS is well placed to benefit from this expansion, because it is committed to regional as well as global service delivery."

He argues that in-house IT departments find it difficult to keep pace with the growing *demands of the organisations* they serve, and the increasing *complexity of PCs and LANs is* putting more strain on them.

Ready for action in an emergency: pictured here at London Docklands are the advanced financial trading positions in the Telehouse purpose-built *data centre, ready for companies needing dealing room disaster recovery services*. The £30m centre – an Anglo-Japanese joint venture – is located three miles from the City of London's financial district, is a 24-hour operation with satellite communication services.

According to a 1993 survey by Romtec, desktop services (PCs, their procurement, installation, configuration and support) is the fastest-growing part of FM – worth over £1bn by *1995. Asset* management, network design, *installation and administration*, and the end-user helpdesk, all come under the "desktop" label. The desktop is one of the prime areas targeted by Bull Information Systems, the newest arrival in the FM mar*ket, which launched its Athesa* FM division this February (see below).

Sharing the benefits of cost-saving is a convincing argument for FM, but there is always concern about staff who have to change allegiance to the "outsourced" supplier. (See panel on Andersen's BP contract for an example). *There are regulations to pro*tect them: the Transfer of Undertakings Protection of Employment Regulations 1981 retains current terms and conditions for staff being transferred.

The government is anxious to remove obstacles to free *market testing. According to* the William Waldegrave, the *minister for public service and* science, speaking at a recent Financial Times conference on resource management, "The relevant provisions of the Deregulation and Contracting-Out Bill, now before Parliament, *are designed to extend the* scope for market testing activities in central and local government by removing obstacles to the contracting-out of statutory functions." This is good news for Athesa and others – *but staff affected might not be* so pleased.

*Unison, the UK's biggest* trade union, and CMS, a division of British Steel, claimed to have broken new ground when they recently signed a trade union agreement which outlined practices and procedures to be followed when staff transferred from Cambridge City Council to *CMS*, a division of British Steel, which won the *multi-million pound contract* in late 1993. According to Mark Pope, CMS sales and marketing manager, this was an important "industry first".

"*We believe it is important* that our new staff have confi*dence in us, and we in them.*" The Unison office at Cambridge City Council stressed the importance of contractors recognising unions. "If we are to be subject to the contracting out of services from local authorities, then *it* is important that any successful contractor recognises unions: *CMS* was the only candidate that *had any track record of suc*cessful relationships with Unions."

This is a hint that the change of culture associated with working for one organisation rather than another might bring new patterns to the computer industry. "*Partnership*" – the key word emphasised by *all FM suppliers – means* both partners making allowances if the marriage is to last.

take in Bull and Andersen stories

Case study: two companies break new ground

# A radical change in culture

Facilities *management* agreement between BP Exploration Europe (BPXEU) in Aberdeen, and Andersen Consulting, broke new ground for both companies. In effect, BPXEU outsourced not only the IT department and the accounting software it had used, but the actual accounting function and *staff as well*.

The decision, taken in the *early 1990s, affected the entire* accounting services of the UK and the Continental Shelf operations – a £12bn business worldwide, employing some 7,000 people. Another unusual aspect was the extreme secrecy of the arrangements: the 300 accounting staff affected were not told *until after months* of negotiations and hammering *out details of the facilities* management (FM) contract.

The driving force for BP Exploration towards facilities management was the need to cut down all expenses by 30 per cent. Tom Wright, control and planning manager at BPXEU , explains the pres*sures brought about by the col*lapse of oil prices since the early 1980s – "we realised we would have to radically alter

Bill Lattimer: "We have taken a process and completely redefined the way the service operates."

*the way we did business to* remain competitive. We had to reduce costs 30 per cent across the board," he says. "It was a requirement for every manager to achieve that within three years without compromising *health and safety*."

The core skill for BPXEU *was its business of oil explora*tion, and a hard look at the accounting services revealed that a line could be drawn *between what accounting* information was truly necessary in-house, and what was not.

"It is vital that we have that information, for making policy and interpreting business information, but not that we provide it ourselves," says Mr Wright.

"Similar styles" is the reason *he gives for the choice of* Andersen Consulting, which already had a track record at BPXEU. When news of the announcement broke in June, it was a brand new idea for both companies. Andersen was to take over accounting staff as well as IT staff and computer assets.

"Initially there was shock, even anger. *However we had* prepared pre-planned, individual, *intensive* counselling sessions, and by the end of the day, people understood the effect it was going to have. We though that was better than months of uncertainty," says Wright.

The business was transferred under transfer of undertaking *legislation, which protects the* employees and their rights. Effectively they had no choice, although for some, the centralisation of operations in Aberdeen, from the six sites previously involved, pre-determined the decision.

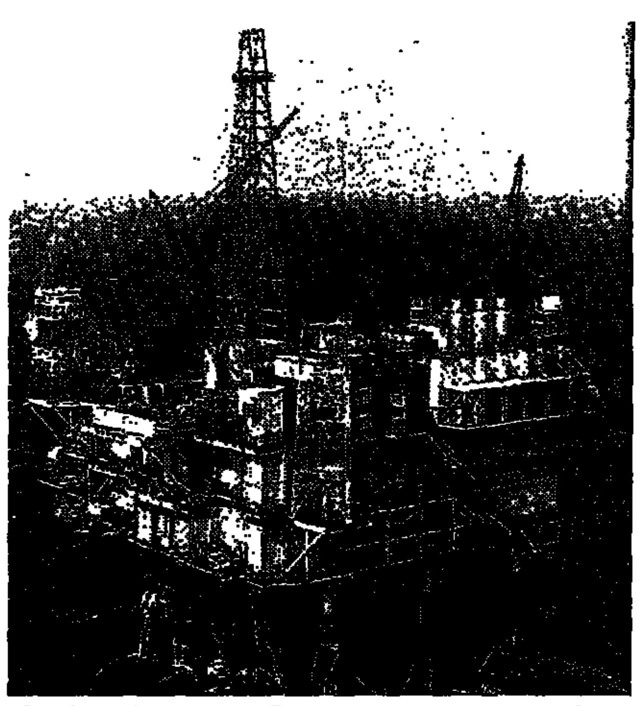
"Everyone outside Aberdeen *had a choice of relocation to* new location or accepting severance terms," says Tom Wright. "They were transferred – full stop. There was no choice."

Andersen took over the staff, *the Vax computer and McCor*mack and Dodge (now Dun & Bradstreet) Millennium software used for the accounts. Wright himself has no doubts that the deal arranged for BPXEU accounting staff actually secured better career prospects and long-term employment.

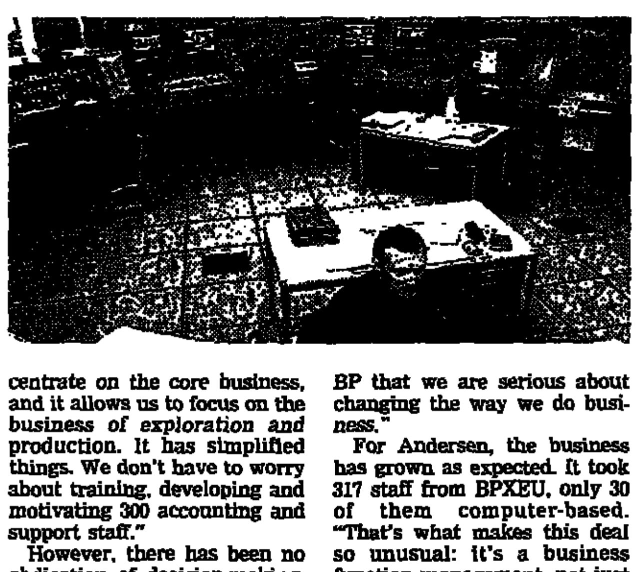
"Andersen Consulting provides greater focus and incentive for the staff who feel far closer to the business. If an accountant works for an accountancy company, it is the focus of using the core skills in the core business that drives *the difference. No one believes* that on 'day one,' of course, but after six or seven months that is exactly what has happened."

The pension rights were the only thing that had to be addressed – in some cases "topped up" to match the BP scheme for those transferring to the Andersen pension scheme.

"The key benefits are the *enthusiasm and the focus of* the staff. It has reduced costs by creating a single interface, instead of a myriad of interfaces," says Mr Wright. "The real effect is that we have turned a fixed cost to a variable, or at least semi-variable cost. As the service expands – say, drilling increases or new fields come online, or we dispose *of other assets – so the* cost varies. Now we can concentrate on the core business, and it allows us to focus on the business of *exploration and* production. It has simplified things. We don't have to worry about training, developing and motivating 300 accounting and support staff."



BP Exploration's incentive for FM was the need to cut all costs by 30 per cent. Pictured below is the central control room on an offshore platform



However, there has been no *abdication of decision-making*. "We take all the business decisions. They provide the financial analysis and variants analysis, but they don't decide what should be done: the decision-making is the core skill." says Mr Wright. He believes the physical distance of the *Andersen operation*, five miles away, was essential to bring about a change of culture.

The initial contract is for four years: both parties reckon on three years to get the costs down, although a longer partnership is envisaged.

"It's an opportunity to share benefits: *if Andersen can grow* the business, they can bring the *cost down. They have the* focus to do it faster and more efficiently. The other thing I'd emphasise is that we really did want the best for our staff. We honestly believed they would have a better future than in a business where the cost pressures of the North Sea were a constant threat," he adds.

The FM contract has had one more important psychological effect, he says. "More than *anything else, the move con*vinced everybody else inside BP that we are serious about changing the way we do business."

For Andersen, the business has grown as expected. It took 317 staff from BPXEU, only 30 of them computer-based. "That's what makes this deal so unusual: it's a business *function management, not just* systems management," says Norman Cook, Andersen's associate partner, the head of the unit at Aberdeen.

It now has extra customers, including Sun Oil in Aberdeen. Cook's view is that Andersen's expertise has already brought savings. *He is confident that* the current costs of £15m per year can be brought down by £5m by 1995 – "we've saved a lot because we manage the bank balance tightly: £500,000 a year in funding charges alone."

Bill Lattimer, partner in charge of market development *for the outsourcing* practice at Andersen Consulting, believes *this is the way FM is going* – "the IT component is of less *interest* to the customer: it's not the important element in Aberdeen. The way we have developed the *people* is important. We have taken an organisation, a process, and completely redefined the way the service operates and the way it interacts with its customers. The value-added service we're providing is our skills in ser*vice definition and manage*ment."



Facilities management: the supplier's viewpoint

# Customer-driven approach

*Starting a facilities man*agement company might seem a radical departure for Bull Information Systems, but when Athesa, its new facilities management (FM) division, was launched in February, Philip Crawford, the chief executive, insisted that the new company was no departure but a logical evolution *from the role that* Bull has long held with its customers, *writes Claire Gooding*.

Mr Crawford sees FM as an international opportunity – "the use of partners to offer a full range of services in the outsourcing arena will be a growing trend. We can draw on facilities in 28 countries," he says.

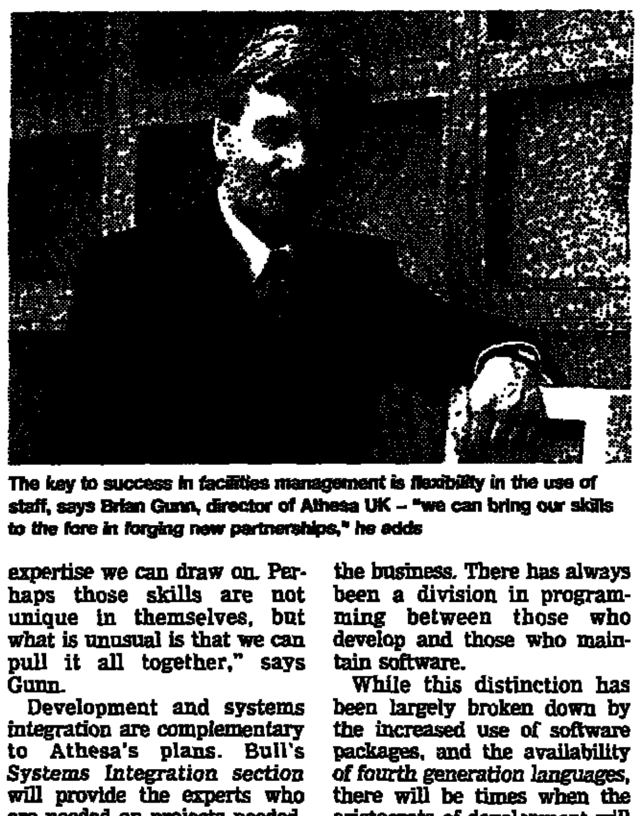
*The company is experienced* in changing its role as the computer industry has evolved. Its primary markets – healthcare, police and local government – are among those most drastically affected by the demands of cost- cutting and compulsory competitive tendering.

According to Athesa director, Brian Gunn, the move is *customer-driven* – "*we are* focusing to deliver a range of services, from under one roof. In the last 12 months customers, especially in local government, have been asking us what we are doing in FM."

Bull has used partnerships of various sorts as the platform *for its own sundry changes of* direction. As part of its adjustment to Open Systems, it has developed strong links with software vendors and value-added resellers. In the past Bull has done well as the prime bidder in single-source contracts, with clients who are *comfortable* with the 'one bottom to kick' principle.

The key to success, he believes, is flexibility in the use of staff. There is a core of 60 Athesa staff in the division, but he intends to treat the rest *of Bull as on call. At one client*, Glaxo, Athesa is providing a desktop service where it is installing, maintaining and supporting PCs, LANs, and Unix servers, not only in the UK, but in 26 countries worldwide. *The* contract has been worth £2.4m since it began in 1992, *and* is expected to be renewed at the end of its current period in 1994.

"We can bring our skills to the fore in forging new partnerships. There is a range of skills and complementary



The key to success in facilities management is flexibility in the use of staff, says Brian Gunn, director of Athesa UK – "we can bring our skills *to the fore in forging new partnerships," he adds*

expertise we can draw on. Perhaps those skills are not unique in themselves, but what is unusual is that we can pull it all together," says Gunn.

Development and systems integration are complementary to Athesa's plans. Bull's *Systems Integration section* will provide the experts who are needed on projects needed, for any period from a week to two or three years. Athesa will provide the long-term support for operations and applications support, and management of IT. Bull's plans are standard in *this area, involving the take*over of staff and assets. "We have the resources on tap, they get the career opportunities," says Mr Gunn.

Athesa's sister company, the People Plus head-hunters, are part of *the partnership*. In one sense, Gunn argues, the source of supply is the cornerstone of the business. There has always been a division in programming between those who develop and those who maintain software.

While this distinction has been largely broken down by the increased use of software packages, and the availability *of fourth generation languages*, there will be times when the aristocrats of development will be needed on a short-term basis.

In concentrating on the desktop delivery, Bull is not alone. Desktop and the network have become more important. Sup*porting legacy systems is* bread and butter, but the market is heading towards improving, not merely maintaining operations.

"It is in the area of business operations that the opportunities of cost-benefits are to be achieved", comments Mr Gunn.

**Leading facilities management suppliers***

| Supplier | UK % | Europe % |
|---|---|---|
| Hoskyns/CGS | 22 | 10 |
| EDS-Scicon | 12 | 12 |
| Sema Group | 11 | 4 |
| AT&T Istel | 9 | 3 |
| Data Sciences | 8 | 3 |
| CFM | 5 | 2 |
| Andersen Consulting | 4 | - |
| DEC | 3 | 2 |
| ITnet | 2 | - |
| P&P | 2 | - |

*Figures for 1991
Source: Input Research Group

■ THE UK'S COMPUTING INDUSTRY

# History often repeats itself

**The development of the UK's computer manufacturing industry ran into problems from the start. Genius was let down by poor marketing and lack of government funding, writes John Kavanagh**

Fujitsu's takeover of ICL in 1990 brought an end to a UK-owned computer manufacturing industry which dated back almost 40 years.

Yet according to some of its early leaders, who met at London's Science Museum at the end of last month to discuss why the early UK promise was not fulfilled, the fact that the industry had survived even beyond the 1960s was quite remarkable.

The packed meeting, organised by the Computer Conservation Society, highlighted the UK's disadvantages from the very early days.

"The UK's contribution was out of all proportion to its population and industrial capacity," said Mr George Davis, who worked at the National Physical Laboratory on the ACE (Automatic Computing Engine).

"This was true at all stages: the creation of basic concepts, the research and development leading to the first computers and the emergence of a computer industry with competing suppliers."

But Mr Davis argued that the breadth of this contribution meant that the UK industry was too diverse from the start.

By the mid-1950s there were eight computer manufacturers. They included Ferranti, English Electric, ICT (International Computers and Tabulators), Elliott Brothers and Leo Computers – this last was the product of J. Lyons' extraordinary expansion from tea shops into building computers.

Lyons is credited with being the first organisation to run commercial applications. Notable among these were bakery production monitoring in 1951 and payroll in 1954. These landmarks inspired The Economist to publish a feature article in 1954 which asked: "Is this the first step in an accounting revolution or merely an interesting and expensive experiment?"

The trouble was that the US, with a similar number of manufacturers, had a far bigger home market on which to build the foundations for its industry – and more government support.

"While the US government was supporting research and development in the late 1940s and early 1950s, with guaranteed orders at the end, the computer industry was not seen as significant in the UK and was not supported," George Davis told the Computer Conservation Society.

This was underlined by the practical experiences of Mr Cecil Marks, who recalled being seconded by Royal Ordnance, where he worked on administration and accounting, using punched card equipment, to a study carried out by government departments into the potential uses of computers. Scientists and users from several departments, including the Treasury, worked for 18 months, culminating in the production of a hefty report and a meeting with "a very senior civil servant."

"At the end of the meeting he suggested that this was not the time to be getting into computers," Mr Marks said. "That led to the ordnance factories, at least, losing ground for more than 10 years."

Other factors were brought to light by Mr Hugh Ross, who set up Ferranti's London computer centre in the mid-1950s. He pointed to a dispute between Ferranti and the National Research Development Corporation, over manufacturing costs underwritten by the publicly-funded corporation, which led to a nine-month ban on sales. As Mr Ross said, this had a "crippling" impact on UK success in the emerging market, as well as hitting Ferranti's cash flow.

But Mr Ross also blamed an absence of financial management for Ferranti's failure to fulfil its early promise. Even when he set up the London computer centre, he said, he never had to account for any money he spent – indeed, he had never had a budget in the first place.

Later, when he was responsible for Ferranti's pioneering documentation service, one of the biggest spending units, Mr Ross again had no budget. Moreover, he had never had to produce a business plan and was never called to account. "There was no financial management at all," he said.

"I later joined STC and came in contact with management training provided by its owner, the US ITT group," Mr Ross added. "This was terrific – and a profound shock, after Ferranti. We had to produce business plans, prepare budgets and report our monthly results against those budgets."

Such personal reminiscences add flesh to historians' reports on UK genius being let down by everything from poor marketing to lack of government funding, compared with the US, France and Germany.

Whatever the combination of factors, George Davis showed how US manufacturers took firm control within a dozen years of J. Lyons running that first payroll system.

By 1967, IBM had installed over 21,500 computers of various sizes; UK market leader ICT (soon to become ICL) had sold 844. These included 399 of the new 1900 range (which was to be the company's mainstay until the middle of the 1970s); meanwhile, IBM's System 360, launched the same year, was already up to 5,730 installations.

In 1968, ICL was formed as the great white hope: the culmination of merging the computing activities of all the early manufacturers. Yet it was still dwarfed by IBM: George Davis showed that in 1969 ICL had a £115m turnover and spent £13m on research and development, while IBM had a turnover of £3,000m and a research budget of almost £170m.

However, a retired ICL executive director, Mr Peter Hall, stoutly defended ICL's record. ICL and its ICT forerunner had been profitable for 35 years – apart from in 1965, just after taking over Ferranti's ailing computing operation; and in 1981, when the visionary Dr Robb Wilmot was transforming the company for the emerging office computing revolution.

Mr Hall said Fujitsu allowed ICL to run itself, and that the company generated all its own cash for takeovers and other investment, and did all its own design work.

Whether that makes ICL any more British than IBM UK (or Rover Group in the car industry, for that matter) is debatable. But Mr Hall argued that these points suggest that the early promise of the UK computer manufacturing industry, which had mostly merged into ICL by 1969, was fulfilled after all. It is simply that a generation later the industry is all in foreign hands.

As today's tight margins on hardware increasingly cause computer manufacturers to look to software and services for their profits, it is equally debatable whether the virtual disappearance of a UK computer manufacturing industry need be a cause for concern.

That concern is now focused more on the software industry, where some big names have fallen into foreign ownership. Takeovers of Cap, Hoskyns, Istel, Scicon and others have given substantial footholds in the UK market to, for example, the telecoms giant AT&T, General Motors' EDS subsidiary and the French company CGS, Europe's biggest computing services group.

History, as they say, has a habit of repeating itself.

☐ *The Computer Conservation Society has regular meetings and works on restoring ancient computers. It is also opening Bletchley Park (which cracked German codes in the Second World War) for public visits. The secretary is Tony Sale, (0234) 822788.*


**Computing 40 years ago: IBM's famous 705 valve computer. By 1967, IBM had installed over 21,500 computers of various sizes; UK market leader ICT (soon to become ICL) had sold 844. These included 399 of the new 1900 range (which was to be the company's mainstay until the middle of the 1970s); meanwhile, IBM's System 360, launched the same year, was already up to 5,730 installations.**

**In 1968, ICL was formed as the great white hope of British computer manufacturing: the culmination of merging the computing activities of earlier manufacturers. Yet ICL was still dwarfed by IBM: George Davis showed that in 1969 ICL had a £115m turnover and spent £13m on research and development, while IBM had a turnover of £3,000m and a research budget of almost £170m. Pictured above is ICL's mainframe systems development centre in 1984, where a systems engineer is loading an EDS 200 disc drive. Illustrated below is the mainline computer at the University of London in 1965.**

# COMPAQ AND MICROSOFT. THE CONNECTION THAT'S MAKING "PLUG AND PLAY" A REALITY.

Just about everyone who's ever used a computer has experienced the same thought : Wouldn't it be great if setting up or upgrading your machine was as easy as turning it on ? The idea is called "Plug and Play". People have been talking about it for years. But now, an ongoing partnership between Compaq and Microsoft , working with other industry leaders, is actually making it happen. Plug and Play is the result of some very fresh thinking in both hardware and software - an accomplishment that tapped the combined engineering expertise of both companies. Together, Compaq computers and the next version of the Microsoft® Windows™ operating system (code-named Chicago) will deliver the long-promised benefits of true Plug and Play : easy setup, easy expansion and easy connection to peripherals. Which means no more configuration headaches. No more hidden switches, cryptic codes or mystery. Even today, Compaq is shipping computers that will take full advantage of Plug and Play technology as soon as the forthcoming version of Windows is available. So the Compaq &Windows combination will quickly become the standard for Plug and Play computing. A welcome reassurance for people who buy computers.

COMPAQ Microsoft®

SHOWS THE WAY

■ SYSTEMS INTEGRATION

# An expensive option for the foreseeable future

## The perceived demand for systems integration has attracted a growing number of supplier and services companies

Like many computer terms, systems integration is hard to define. At one level, any computer-based information system must be integrated or it will not work. But the term has come to refer to a particular class of computer system – that is, one which is assembled from a set of components in a way which hides the technology from the customer.

The importance of systems integration as a discipline has grown steadily since companies began the move towards open systems. A system does not, of course, need to be "open" to require integration – but this is where the largest demand is.

Proprietary systems are also "integrated" – but most of the integration is performed by the manufacturer and the system is sold as a complete solution.

Open systems bring the advantages of user choice and flexibility – but there is a price to pay. They are constructed from hardware and software "components" which are usually sourced from several different manufacturers. They will almost certainly involve the use of a technological design framework which separates systems functions into users and services. This approach is usually referred to nowadays as client-server computing.

Advanced skills are a prerequisite to bring these components together to create coherent and useful applications. Systems integrators must have a wide knowledge of "componentry" and how it may be brought together successfully.

They must also have strong software development skills because integrated systems invariably require some "custom-built" components to meet the application need.

The perceived demand for systems integration has attracted a growing number of supplier and services companies in the past two or three years.

Established hardware manufacturers in particular have seen systems integration as a growth area as margins on hardware have fallen. IBM, DEC, Groupe Bull, ICL and Unisys have emphasised their systems integration talents in recent years and their service revenues have grown accordingly.

They are not the only contenders. Large consultancy companies such as EDS, Andersen Consulting and KPMG have also made a large dent in the market as indeed have traditional custom software developers such as Logica, SEMA and CGS.

Successful systems integration depends on a broad foundation of standards for both hardware connections and software compatibility.

Some standards are drawn from formal efforts by international standards bodies such as the International Standards Organisation (ISO) and the American National Standards Institute (ANSI).

But many of the standards which make integrated systems possible have evolved from proprietary industry standards such as IBM's SQL database standard, which is used to link desktop data tools to database servers.

Given the importance of open systems standards, it is no surprise that the lead in systems integration has come from the public sector.

The procurement policies of government departments have pushed the cause of open systems and put many of them in the front line.

"The UK government's decision to force open systems by legislation has been good for the systems integration market," says Mr Philip Crawford, UK managing director of Groupe Bull.

He goes on to say that there are other reasons why the demand for systems integration has grown faster in the government sector than in the commercial sector:

"For the last two years companies have been holding off making large investment decisions because of the recession – and obviously the recession hits commercial world much more than it hits the government sector."

Mr Crawford adds that this has depressed the market – but that there are signs that this is starting to change:

"The market has probably grown at around 15 per cent – when two years ago we expected it to be more like 40 per cent. But it is now being driven by the user. The demand for systems integration is coming from the user because they are crying out for usable power."

This demand is manifested in the demand to integrate desktop PCs into existing systems. The PC is obviously the best way to deliver usable power to the desktop.

Mr Crawford warns, however, that there are dangers:

"The PC is two different tools. If you think of it like a car – it is excellent for driving around town but it is also pretty good on the motorway. Good systems integration makes sure that the corporate strategy – the motorway – does not overwhelm the desktop," he explains.

Groupe Bull's systems integration strategy, like many others, is based on developing the right combination of technical skills and relating these to business problems.

It also sees the wisdom of securing alliances with other important players in the market and recently signed an agreement with software developer Microsoft to integrate PC software with its own larger systems.

"This is more than a marketing agreement. We have had to work hard to prove to Microsoft that we have the integration skills and the support services to do the job," says Mr Crawford.

The deal will give Groupe Bull advanced access to important Microsoft developments such as the Windows NT operating system, which looks set to be a leading component in future client-server systems.

This level of software is increasingly important to the success of systems integration as indeed is the move to object-oriented computing, which will help to enforce standards for software components.

Despite this, systems integration will never be easy – especially as the number of choices open to users increases.

"Users have developed an attitude which means that they expect information technology to support them – whereas a few years ago they had to put up with what they were given. But because of openness, there are far more decisions to make now and it is certainly is not getting any the less complex," observes Mr Crawford.

Systems integrators are, therefore, in the unenviable position of having to keep up with every new technology development at the same time as meeting the growing demands of increasingly educated users.

For this reason, systems integration is likely to remain an expensive option for the foreseeable future.

The investment bank, Barclays de Zoete Wedd (BZW), one of the City of London's leading equity dealers, has switched over to a new multi-million pound share settlement system, called Aries. Developed and installed by Syntegra, the systems integration business of BT, the new system will hand all BZW's UK and international equity settlements with greater speed and accuracy. Aries handles up to 22,000 trades each day.

The importance of systems integration has grown steadily since companies began the move towards open systems. Integration will never be easy – especially as the number of choices for users increases.

Document image processing: two case studies

# How automation cuts the invoice paper chase

Matching invoices to orders and goods-received documents tends not to be a favourite job or a high priority for business people, *writes John Kavanagh*.

British Gas North Eastern, which has six districts and a Leeds headquarters receiving 200,000 invoices a year from 8,000 suppliers, has automated the paper chase with document image processing and has reaped considerable benefit.

Paper movement has been drastically reduced, people holding up the process have been pinpointed and cash flow has improved.

The paper chase used to involve an order document going to a supplier and a copy being signed off as the goods-received note when the items arrived. Invoices were sent to the finance department in Leeds, which passed them to the relevant districts to be matched against the goods-received notes. These notes and the invoices were then returned to Leeds for the details to be keyed into the payments system. The documents were finally recorded on microfilm.

Mrs Christine Kelly, invoice supervisor, recalls: "There was paper flying about everywhere."

The invoice unit installed software from Image Systems Europe on its existing office network of ICL personal computers and Novell network software, which was already used for basic office automation such as word processing and spreadsheet processing.

The PCs were fitted with large screens to display full images of documents and two Fujitsu scanners and three Sony optical disc systems were added, all supplied by Image Systems Europe. One of the optical disc drives is reserved for copying each day's work, for back-up.

Goods-received notes and invoices are all scanned in as they are received from districts and suppliers. The order number is keyed in and stored with each document as the main reference point: an order number includes a code representing the district which made the order.

The amounts on the invoice are also keyed in and put through a validation program to ensure, for example, that the figures add up and that the VAT has been calculated correctly.

This information has to be keyed in because document scanning systems handle complete images and cannot recognise individual parts of different documents to capture an address or total figure.

When the system receives an invoice it uses the order number to search for a matching goods-received note. If it does not find one it automatically directs a query to the relevant district office where staff can access the central optical disc system through their own PCs.

Matched invoices are passed automatically to the payments system on the region's ICL mainframe computer. The mainframe link is also used to retrieve information such as supplier details from central files.

The system has brought significant staff savings and enabled fewer people to deal with the same amount of work while providing better service. The paper chase has been largely eliminated and keyboard data entry and verification have been vastly reduced.

Cash flow has improved because more suppliers are paid on time. "We no longer pay them late – or early," says Christine Kelly. "Suppliers would phone to ask for payment and it was difficult to find the right bits of paper. We now have easy access to all the documents and can see if payment is due."

People's reluctance to check goods and sign goods-received notes was the biggest problem before but the system has got to grips with this. "It's fantastic in this area," Mrs Kelly says. "Before, we knew we had queries but couldn't keep track of them. We now know exactly where queries are and can gee people up to act on them. We can now be proactive rather than reactive."

□ Software details:

□ Product: Image Systems Europe tailors each document image and work flow management system to the customer's needs. British Gas uses a version called ISE Accounts Payable, which can match order documents to invoices and link to accounts payable systems. A fax facility is available. The system was launched in 1991. Number of users: six for ISE Accounts Payable: three British Gas regions, Tesco, Top Rank and Woking Borough Council. The company has 55 document and work flow management systems installed in the UK and Europe.

□ Supplier: Image Systems Europe, formed as a UK company in Sheffield in 1990. Turnover in 1993-94 was up by 48 per cent at £2.14m.

□ Price: £100,000-£150,000, including software, scanner and optical disc system but excluding PCs and networks.

□ Hardware and operating systems: Novell networks, Unix computers and IBM-type PCs running OS/2.

# A better way to manage contracts

## A simple document image processing system installed by the pharmaceuticals company Medeva looks set for wider use following quick installation and enthusiastic reports from staff, writes John Kavanagh

Medeva, the UK pharmaceutical manufacturer, has installed Archis software from Belgian company Softcore to manage images of contracts, typically with other manufacturers, licensees and distributors.

Medeva has installed a network of five Apple Macintosh computers at its offices in Leatherhead, Surrey, partly to run Archis and partly to support office automation such as word processing, spreadsheet processing and links to the company's electronic mail system.

The entire stock of 930 agreements, running to 18,000 pages, has been entered and all new agreements are scanned in immediately.

The paper contracts have always been kept in fire-proof cabinets and a list was maintained through a simple database system based on the Dbase III product.

People working on particular agreements would consult the holder of the list, intellectual property co-ordinator Gail Beale, to see if there were any other relevant documents, and then hunt them out in the filing cabinets. All the documents are now on-line to all staff in the department.

"It could take hours to get through these steps and find files, especially if you wanted, say, all the agreements relating to a particular company," says Mr Peter Cozens, head of licensing and product acquisition.

"The files were just stored in chronological order. We can now search on many criteria, such as company name and therapeutic area, so we can easily find the history of agreements in a particular field.

"The system has improved the information we have available and our ability to respond to different situations."

It took Gail Beale three months to scan-in all the documents and assign keywords to each one. She and Peter Cozens agree that the system is very easy to use. A 'find' screen is presented when a user logs-in and a search is generated by entering the keywords.

Access is being extended to the company secretary's office in London and the system has attracted the interest of other departments.

"We could turn out to be a pilot for the whole company in document image processing," says Gail Beale. "It's a very impressive system and I could see other parts of the company getting considerable benefits."

□ Software details:

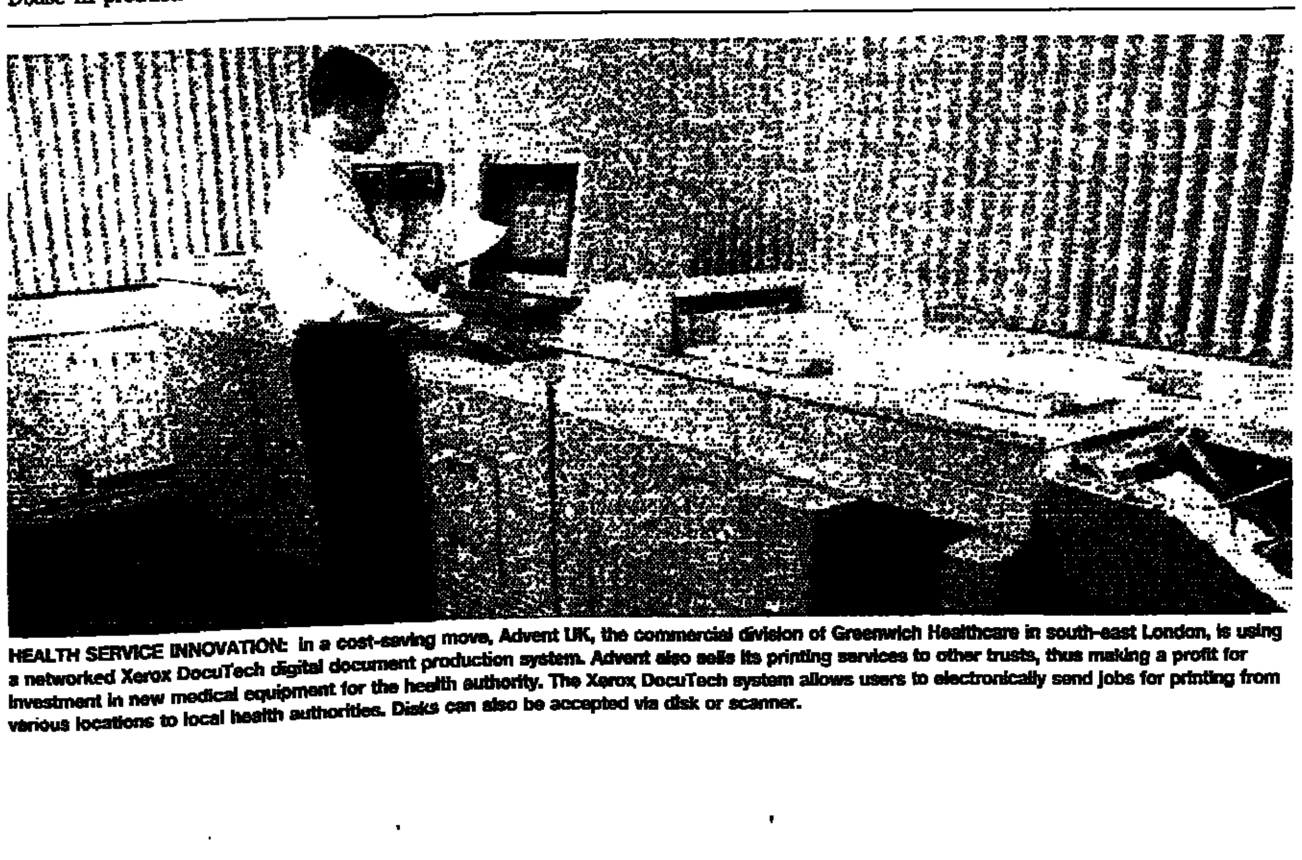
□ Archis, a document file management package combining document images, video and data and text files from other systems. The latest version, 2.0, was launched in September 1993. Price: £995.

□ Supplier: Softcore, the Belgian developer, formed in 1988. The UK subsidiary was formed in Uxbridge, Middlesex, in 1992. It has 47 staff, including five in the UK. Turnover in 1993 was £1.5m. Number of users: more than 200, including more than 50 in the UK.

Hardware and operating systems: Apple Macintosh central processor; Macintosh workstations or IBM-type PCs running Windows.

□ Advances in the electronic office: see page 5
□ For details of forthcoming FT surveys relating to information technology, see details on page 12.

□ An in-depth review of office automation appeared in the latest issue of 'Software At Work,' the FT's review of business software, published on Thursday, March 10.



HEALTH SERVICE INNOVATION: In a cost-saving move, Advent UK, the commercial division of Greenwich Healthcare in south-east London, is using a networked Xerox DocuTech digital document production system. Advent also sells its printing services to other trusts, thus making a profit for investment in new medical equipment for the health authority. The Xerox DocuTech system allows users to electronically send jobs for printing from various locations to local health authorities. Disks can also be accepted via disk or scanner.

**Tom Foremski** highlights advances in personal digital assistants

# Potentially large market in the longer term

**Like so much pioneering technology, the first generation of these small devices has largely failed to meet user-expectations – but a wave of improved products is on the horizon**

Personal Digital Assistants (PDAs) and personal communicators represent the next big computer market, and for some industry observers, possibly the last of the potentially large market categories for computers.

*These small computer* devices represent the logical progression of computer technologies as they move from the desktop, to portable computers, to the lap-top and finally to the so called palm-top. But like much pioneering technology, the first generation of these devices have so far failed to meet user expectations.

However, there are encouraging signs that the second generation of *products* will overcome some of the problems.

*Apple Computer was the* first to coin the term 'PDA' *which is rapidly turning into a* generic name for small computers with communications capabilities. Tandy, which sells the Zoomer, sometimes uses the term "personal information assistant," while IBM and AT&T prefer the term "personal communicator."

They all describe a small computer that can be comfortably held in the hand or slipped into a jacket pocket, with a touch-sensitive screen with a pen or stylus input device and wireless communications capabilities for sending *and receiving electronic mail* or faxes and transferring files *to a desktop computer.*

A typical PDA will include software that consists of a word processor, a diary for scheduling appointments, and a database to store information such as phone numbers and addresses.

The first PDAs to hit the market were the Apple Newton MessagePad, Tandy's Zoomer and AT&T's Eo Communicator. Each has taken a slightly different approach but all are united by the fact that their sales have been far short of stellar.

*The Newton MessagePad* represents the most ambitious technology. *It* includes sophisticated handwriting recognition software that turns the "digital ink" that is written by the user with a special stylus, into computer text. While the handwriting recognition technology is state-of-the-art and works better than most previous handwriting recognition technologies, its performance has not impressed most users.

The handwriting recognition *of the Newton fails to* recognise many words, resulting in a sometimes comical re-interpretation of the users words, as satirised recently in the *Doonesbury* comic strip.

The Newton also has problems with foreign languages, especially German where *average word lengths are 10* characters instead of the six characters average for English words. Newton has also been faulted for its communications links which do not perform as well as expected.

The Tandy Zoomer, also marketed as the Z-7000 by Casio, has avoided, to a large degree, the quagmire of handwriting recognition. *It* cannot recognise cursive writing but it does have a very limited ability to recognise printed characters. It prefers to store images of the user's notes instead of performing the difficult handwriting interpretation.

The AT&T Eo Personal Communicator packs more technology into its sleek box than Newton or Zoomer, but it is twice the price. Unlike the others, it includes a 20-megabyte hard drive that allows it to store much more information. *But it suffers from* a short battery life – about two hours – and you really need to upgrade the machine's memory to use its fax and e-mail communications features.

All the leading PDAs have been criticised for being too *slow and they all use different* operating systems which *makes it difficult to* produce a decent number of software *applications.*

The Newton has its own proprietary operating systems, the Zoomer uses the Geos software from GeoWorks, and the Eo device uses the PenPoint operating system.

This multiplicity of operating *systems makes life* difficult for software *developers. They have to try to* guess which device will sell enough units to create a large enough potential market to justify the expense of applications development. And without sufficient quantities of third-party software, the PDAs face a limited appeal.

Despite *the* initial *problems* that have beset the first-gener*ation PDAs, the second* generation devices promise improvements and new features that will make them more useable and hopefully will fulfil the large unit sales expectations of market researchers.

Apple, for example, is redesigning the Newton to add bet*ter communications* capabilities, and an improved operating system. Handwriting recognition is also improved but, in what is an admission of a less-than-perfect system, the next Newton will have the option to store images of a user's notes without convert*ing the handwriting to com*puter text.

AT&T, stung by the disappointing sales of the Eo Communicator, is redesigning the system, lowering the price and making it more of a mobile telephone with *computer* features.

Other leading computer companies are also planning PDA introductions. Compaq Computer, Motorola, IBM, and Sony are just a few of the big companies that will introduce PDA-type devices later this year.

IBM's plans include a variety *of PDAs designed for specific* tasks, such as one model equipped with voice recognition for dictating documents and using a pen-input device for editing. Another IBM PDA is designed for e-mail communications, allowing users to hear messages spoken in a computer-generated voice and to dictate a response.

PDAs could benefit greatly from a standard user interface. *General Magic, a Silicon* Valley-based company, earlier this year unveiled *its Magic* Cap user interface which is specifically designed for PDA devices with communications capabilities. The *Magic* Cap interface features a tiny graphical user interface using a buildings metaphor. Users navigate through the *systems to* reach *different applications* by choosing different types of *buildings such as a post office,* for example, to send messages.

*Magic* Cap is designed to work with on-line services such as Compuserve or AmericaOnline and specialised on-line services that use the companion Telescript technology. Because of the small storage *capabilities of PDAs,* on-line services are becoming a key factor in the success of PDAs. They will offer data storage services to PDA customers and also carry e-mail and faxes.

AT&T recently announced its PersonaLink on-line service *that will support PDAs, and* Apple's eWorld on-line service will support Newton users.

It is said that you can always recognise the pioneers by the arrows in their backs and although the first generation of *PDAs collected a fair number* of arrows, it is only a matter of time before the next generations become ubiquitous and useful devices.

Tulip Computers' new pocketbook: weighing just 4lbs and the size of an *A5 notepad, the pocketbook (model 386sl) combines the advantages of* an electronic organiser with the power and screen benefits of a standard PC. It links easily into a larger desktop computer at the office.

Apple's Newton MessagePad represents the most ambitious technology in the PDA field. It includes sophisticated handwriting recognition software that turns the "digital ink" that is written by the user with a special stylus, *into computer text. While the handwriting recognition technology* is state-of-the-art and works better than most previous handwriting recognition technologies, the performance of early models was criticised – but *enhanced products are on the way.*

Technology developments in Canada

# The clear message: innovate or perish

**Canada's successful IT companies demonstrate that to survive they must be show greater speed and originality than their US competitors, writes *Geof Wheelright***

When you live next to a country as large as the US and want to succeed in the information technology sector, you have to *innovate to survive.*

That is the story behind Can*ada's best personal computer* and telecommunications companies – which seem to win new business by creating specialised solutions for surprisingly common challenges.

Take the success of Cana*dian personal computer fax* software maker Delrina, which hit the world markets in a big way with its WinFax software for Microsoft Windows, a few years ago. Many companies had tried to produce software which allowed users to fax documents direct from their PC screens, but none had ever really achieved much success with it until this Canadian company came along.

*By closely identifying* a need for simple design, low cost and an ability to work with dozens of popular personal computer fax modems, Delrina almost created the market for Windows-based fax software. *Today it dominates that market.* It has been successful in building on the reputation of WinFax with a range of form-design products and fax add-on systems, and operates in a number of countries including a subsidiary operation in the UK.

*Likewise, the Toronto-based* Vivid Group identified at an early *stage* the potential of "virtual reality" technology. Using its implementation of this idea, it started building entertainment and education systems.

Today, the company's Mandala System, an interactive virtual reality product, allows users to indulge in a variety of "virtual" experiences including *virtual ice hockey (something* guaranteed to make it a big hit in Canada), virtual volley ball or soccer, and even a virtual swim in the shark-infested waters of Australia's Great Barrier Reef. The Vivid Group *recently won the ultimate* accolade for its virtual reality *technology when it was* selected to provide a key element of Paramount Pictures' Virtual Star Trek Transporter Experience.

According to *The Computer Paper*, the founder and pub*lisher of Canada's largest com*puter publication, many successes of this kind do not stay Canadian for very long. Doug

Continued on next page

■ VIRTUAL REALITY

# Interaction of created worlds

**Optimists see virtual reality as offering a richer form of communication, but pessimists see it as a disturbing retreat from the grimness of real life. Here, Philip Manchester looks at one of the likely growth markets of the next decade**

Many advances in computer software have their origins in play. From the early chess programs, which were used to demonstrate the power of electronic brains in the 1950s, to the multimedia shoot-'em-up video games of today, programmers have used games to push the envelope of software technology.

Advances in high-resolution graphics, data compression, animation and user interface design have often been pioneered in games software before making the transition to business. Games and other leisure-based uses of computers have also laid the ground rules for computer-generated, alternative worlds or what has come to be called virtual reality (VR). This new strain of software now promises to open exciting applications in business.

"One way to see VR is as a magical window on to other worlds from molecules to minds. Another way to see VR is to recognise that in the closing decades of the twentieth century, reality is disappearing behind a screen," writes Howard Rheingold in his book, *Virtual Reality*.

It could be argued that anyone who sits in front of a computer all day to do their job, already spends much of their life in VR. Even a simple program like a spreadsheet can be engrossing enough to its user to suspend physical reality.

The convergence of computers and communications pushes this even further. Bulletin board systems and networked chatlines are now well established in the US and growing fast in Europe. Network services like the Internet, CIX and Compuserve have created a multitude of widely-dispersed, electronic communities, each with their own culture. The phenomenon has spawned a new language, a literary sub-genre *(cyberpunk)* and the idea of an ultimate virtual nirvana called *cyberspace*.

There is, of course, not just one virtual reality, but many. At one extreme, it is possible to become immersed in VR by using an enclosed helmet with a built-in display and sensor devices which can pick up body movements.

At the other end of the spectrum, a serious desktop flight simulator such as Microsoft's package for the PC, can be just as convincing.

VR purists argue that immersion is the only genuine VR experience and there is research into all-over body suits which can take this to its logical conclusion. The aim is that such a suit should act both as sensing device to transfer body movements to the computer and also to convey a sense of touch.

Sensor suits to transmit body movement are already available. At the Virtual Reality Expo show in London in February, for example, the UK company Virtual Presence launched a 750 gram, Lycra suit equipped with 96 sensors, and there are others available in the US.

Work is also under way to build systems which can respond to objects in VR and transmit this sensation back to the user. Researchers at the University of North Carolina, for example, have built a device which can be used to manipulate images of molecules with a full feedback system. The Argonne remote manipulator (ARM) is used to explore possible combinations of molecules for new anti-cancer drugs. If the properties of the molecules do not allow them to fit together, the resistance is conveyed back to the user as a physical force.

There is also some speculation in fringe literature about the possibility of direct connections from the human brain to VR systems – thus eliminating the need for a suit.

At a more mundane and practical level, less intrusive VR software is now within the reach of the PC user – mainly for games – but increasingly for other activities such as mail order shopping or travel planning. Desktop computers are now powerful enough to handle high-quality, three-dimensional graphics and convey an impression of space. It is now possible to walk around buildings which do not exist, fly a jumbo jet through a thunderstorm and visit places on the other side of the world without leaving your desk.

The concept of VR has, of course, been around for some time. The well-established flight simulator, for example, has been used for training pilots since the early days of flying. More recently, simulated environments have been devised for other training activities – such as working in hazardous environments.

What marks out the new generation of VR software is that it goes beyond merely representing the physical world – like a flight simulator – or creating a possible future with a spreadsheet. VR enables the creation of worlds which do not exist and allows interaction with them.

This has spawned a generation of software tools which can help to visualise data in new ways.

Superscape, a VR tool from the UK company Dimension, has been used, for example, to show the effects of drugs on the human body. The software allows a user to navigate around a representation of the body and see the effect of a drug down at the molecular level.

"The market is only now becoming aware that VR products are available for low-cost computing. Once their eyes are opened to it, the ideas come rushing in. We have about 30 applications built with Superscape and most of them have come from customers," says Mr Ian Andrew, managing director of Dimension.

In addition to the drug simulation VR, which is being used by SmithKline Beecham, Superscape has been used to build VR environments as diverse as a telecommunications network simulation for British Telecom and an exhibition modelling system for Dragon Exhibitions.

Although Superscape can support the more exotic VR peripherals, such as headsets and sensors, Mr Andrew says that the demand is for applications which are non-immersive and based on the desktop: "Immersive VR was what caught people's imagination in the first place – but most people are uncomfortable with it. I'd say 90 per cent of what we do is for the desktop. But we have left room to support the other devices and can offer users an upgrade path when they need it," he explains.

Faberushi, another UK VR specialist has built a multimedia virtual exhibition system (VES) which re-creates the sound, look and feel of an exhibition floor. Virtual visitors to the show can walk up to a virtual computer screen and see a demonstration of a product.

"The interaction between people and machines is what is important about VR. It lets you create spatial relationships which is very appealing - people understand the rules of space," says Mr Perry Huber, a consultant with Faberushi.

"Proper VR allows you to move around in free form – like surrogate travel."

Mr Huber also sees VR changing the way we use computers and improving the user interface: "One of the obvious things in the business environment is that you can get way from simple graphical user interfaces. The three dimensionality lets you bring a context to data and visualise it better."

Data visualisation in three dimensions might seem far fetched. But imagine explaining what a spreadsheet program could be used for ten years' ago.

VR offers the same potential to change the way data is viewed and presented.

Software developers are already experimenting with the possibilities. Maxis, a US software company, has built a VR package which simulates the Wall Street Stock Exchange in the form of a casino. Prospective investors can risk their funds and enjoy themselves at the same time.

The market for VR products like these is expected to grow quickly over the next few years and an increasing percentage of revenues will come from commercial applications. Market researcher Frost & Sullivan (F&S) forecasts a growth rate of 65 per cent a year in the US market, with revenues exceeding a billion dollars by 1997.

Leisure-based applications are expected to dominate throughout this period and show the largest growth. Another US market researcher – 4th Wave – estimates that 70 per cent of 1993 revenues for VR products came from the entertainment sector and this will increase to 76 per cent by 1997.

But commercial applications of VR technology on the desktop are likely to be the most profitable – with training, data visualisation and computer-aided design leading the way. Specialised commercial applications which can harness the power of VR software will sell at a premium.

The parallel growth of high bandwidth telecommunications and multimedia technology – both of which provide the infrastructure for VR applications - promises to make the market for VR software one of the most exciting growth areas into the millennium.

VR could also precipitate change in wider context.

The pessimistic view is that it will lead to the disturbing future described by Aldous Huxley where people hide from the grimness of the physical world at the 'feelies'. The optimistic view is that VR will enable humans to find a richer form of communication, unimpeded by the laws of the real world.

One thing is clear, an increasing amount of communication between humans will be mediated by computer software and, even when this is not called VR, that is exactly what it will be.

Flying the network: this is an experience that will enable telephone engineers to have an overview of complex telecommunication structures. This virtual reality desktop system, now being developed by BT, allows users to interact with a three-dimensional model of the network

The virtual reality office: the £2.5m Virtuosi project is developing a computer-generated environment where users can collaborate, regardless of location. The computer screen on their desk will not only give the latest financial figures, but it will provide a window on to a virtual office, spanning the whole organisation. A user will be able to move about this virtual office to interact and talk to virtual colleagues. The project, involving a consortium of universities and companies, led by BT, is supported by the UK government.

Success for a VR software developer

## The City gives its backing

The business opportunities that virtual reality software technology can offer were underlined recently by the public flotation of the UK company, Virtuality Group.

It came to the London Stock Exchange in October 1993 with a share price of 170p, valuing the company at £44m and turning its founders into multi-millionaires, *writes Philip Manchester*.

Since then, the share price has doubled and Virtuality is seen as a hot investment.

Started as W Industries in 1987 in the classic computer industry style – in a garage on the outskirts of Leicester in the UK – Virtuality earned revenues of about £5m last year from sales of VR equipment and software, placing it among the world leaders of the emerging VR industry.

Its customers include Matsushita, MCA Universal Studios and games company Sega.

Virtuality has also attracted investment funds from IBM and Motorola, and has ambitious plans in the VR software industry.

Co-founder and managing director Dr Jonathan Waldren is reported as saying he wants the company to be the Microsoft of VR.

Virtuality's current products are at the high end of the VR market. The company concentrates on what it calls leisure products – although its definition includes education applications, as well as advertising and promotional tools.

Virtuality's primary product is an 'immersive' arcade game machine which sells for £25,000 upwards.

Sega plans to install Virtuality games in the 'super-arcades' it is building worldwide.

# Search for venture capital

Continued from previous page

las Alder, who founded *The Computer Paper* seven years ago, says that moderate success is quite commonly followed by US corporate acquisition.

He says that even raising initial venture capital is a tough slog for most Canadian developers and entrepreneurs. "There just aren't enough millionaires in Canada," he says. And even when Canadian companies do achieve moderate success, there is no "peer group of aspiring billionaires" willing to spend the money, time and energy to help grow the Canadian companies –"most companies don't make it." Alder says.

And when they do make it, they often become American companies in due course. Take the case of SoftImage, the Quebec-based computer animation specialists, recently acquired by US software house Microsoft for $130m.

In this case, SoftImage will be allowed to stay in Quebec and pursue its existing business – while its technology will also be incorporated in future Microsoft products.

Microsoft has been quite active in the Canadian technology sector. In 1991 it purchased Consumers Software, another Canadian company, and turned it into its first big North American research and development facility outside the United States.

Based in Vancouver, it now employs more than 100 people and has been renamed Microsoft Workgroup Canada.

"We see a bright future for Canadian business and the local personal computer industry," says Mike Maples, executive vice-president at Microsoft.

"The Canadian personal computer hardware and software market is one of the most advanced in the world."

But being a Canadian personal computer hardware manufacturer is a tougher business. Ask, for example, Benjamin K. Tam, president and chief executive of Burnaby, British Columbia-based Darius Technology.

Tam has been making and selling personal computers in Canada for more than six years, but admits that it is a tough market – particularly when many Canadians can shop quite easily for US computers over the border.

Tam says that the recent Canada/US/Mexico North American Free Trade Agreement (Nafta) does not make this job any easier.

"In the Canadian market, we are affected by the economic situation of our giant neighbour, the US, as well as by the agreements and government policy of the Canadian government," he says.

"Nafta could affect us severely in the high technology sector. Although we are known to be strong in the telecommunications side, we are not at all competitive (in the computer market) because the sheer volume is not there in Canada."

One solution has been to sell recently-developed products, including a network file server system based on Digital Equipment's powerful Alpha AXP computer processor, in both the US and Canada.

As a result, Tam now boasts that 22 per cent of his company's annual sales are in the US, with the rest in Canada. And in the near future, he is expanding to the Far East – a move becoming increasingly popular among Western Canadian companies.

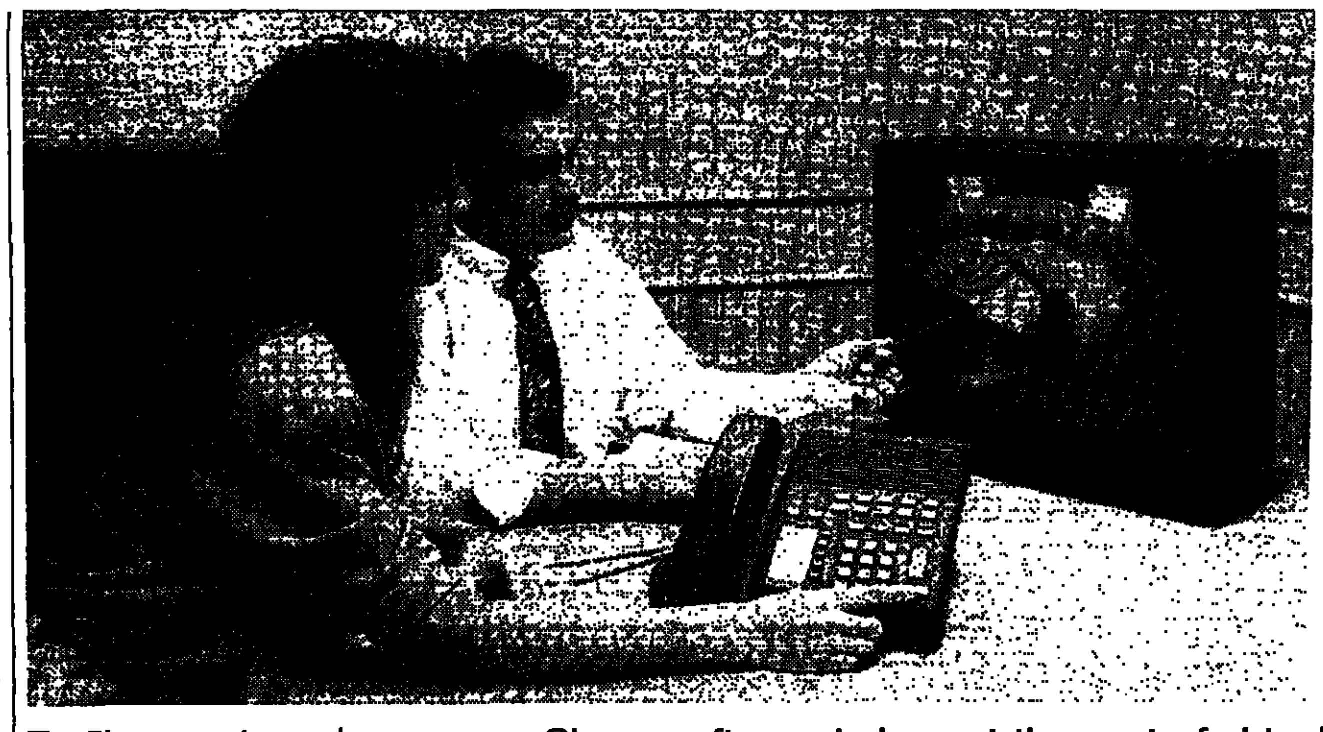
Tam recently signed a $1.5m joint venture agreement with a state-owned enterprise in China. It will begin manufacturing computer displays in Shanghai this summer. Tam says that these products are being made for both the Far East and North American markets.

In short, while Canada has the resources and the talent to create world-class high technology companies, it may have to move quite quickly to sell products outside its borders if these talents are to survive.

With a domestic market of only slightly more than 25m people, spread over thousands of miles, this is perhaps not surprising.

In terms of land mass, Canada is the second-largest country in the world – and distribution costs can be high. But judging by the successes of Delrina and the Ottawa-based Corel Corporation (developer of the popular Corel Draw software and now owners of the Ventura Publisher desktop publishing suite)Canadian companies can succeed on the world market.

The secret is to be there from day one.



**The Picasso system**

AT&T's Picasso still-image phone, above, allows users to send full-colour, TV-quality still pictures, using an ordinary phone line – while simultaneously talking over the same line. The system, priced at $3,295, takes about ten seconds to transmit a single image. The intended market is for engineers and other professionals needing fast transmission of detailed images.

The device looks like an office phone, but contains a data modem and transceiver. To transmit a picture, users plug in a video camera, photo compact disk player or digital still cameras. On the receiving end, a computer monitor or TV set displays the picture.

Clever software helps cut the cost of virtual reality

# A new world on your desktop

**One of the most important recent developments in Virtual Reality (VR) is the fall in prices of hardware and software packages.**

**VR systems demand large computer resources and high-quality input and output – which has been expensive until recently.**

**But advances in hardware technology, such as faster PC processors, larger capacity storage and graphics software have made desktop systems possible.**

**The most important element is the clever software which is needed firstly, to build a virtual reality to suit a specific need and, secondly, allow a user to visit and inter-act with it.**

**UK-based software developer Dimension sees a growing opportunity in the emerging commercial market for VR tools on the desktop.**

**Its Superscape package, which sells for around £3,500, can be used to build specific VR environments on a desktop computer.**

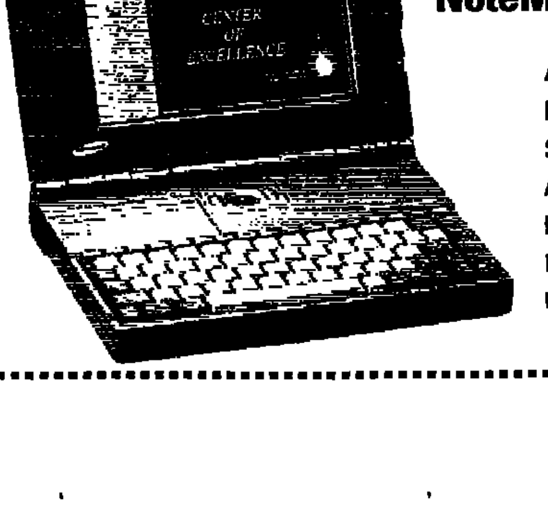
**The package has a broad range of users from British Telecom, which has built a virtual network with Superscape, to the Shepherd School, which is using VR to help children with learning difficulties.**

**One of the more exciting applications of Superscape is Tyne and Wear Development Corporation's creation of VR model of the £180m Quayside development in Newcastle.**

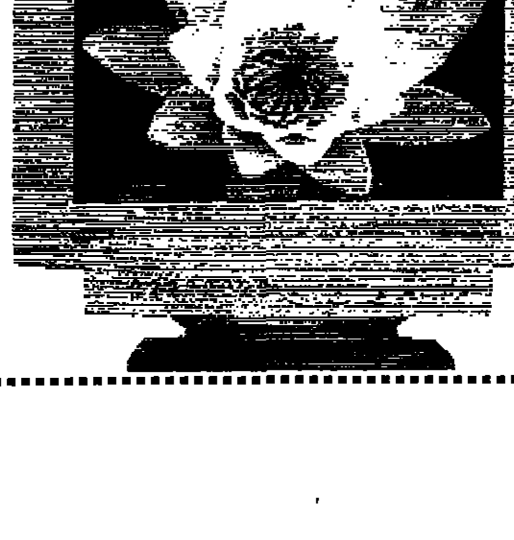
**The VR Quayside is being used to view how the development will look in advance and sell it to prospective investors.**

Philip Manchester









■ FACTORY OF THE FUTURE

# A central link in the chain

**Most of Britain's leading manufacturing companies expect to invest heavily in information technology in the next five years, reports Andrew Baxter. The most popular planned investments are manufacturing management systems**

After 20 years of dramatic developments in the information technology used by manufacturers – from the earliest computer-aided design systems to modern relational databases and shopfloor management systems – there is no let-up in the pace of change.

Information technology (IT) vendors still see plenty of opportunities to fulfil the changing needs of manufacturing companies, while the customers are reacting to the disappointments of the past by taking steps to ensure their IT needs really are met in future.

It is partly because of past disappointments, and the fact that previous investments are no longer compatible with newer technologies, that spending on IT by manufacturers remains a high priority.

According to a MORI survey last month for the ASK Group, developers of business software, and the accountants Coopers & Lybrand, 82 per cent of 100 companies picked at random from the UK's top 1,000 manufacturers expect to invest heavily in IT in the next five years – and 60 per cent of managers expect to spend more than £1m.

The most popular planned investments are manufacturing management systems, where 73 per cent plan to spend money, and supply chain systems to improve performance, where 62 per cent expect to invest.

This year's Computers in Manufacturing Show, at the National Exhibition Centre, Birmingham, from November 22-24, will demonstrate some of the state-of-the-art IT products seen by industry as a priority for their broader business needs. Examples are virtual reality and rapid prototyping tools to improve and accelerate product development, and just-in-time software which allows manufacturers to operate lean production techniques.

These and other technology developments now becoming available provide some clues as to what will be the IT needs of the factories of the future.

Mr Graham Williams, managing director of AT&T Istel's manufacturing division, believes the next five years could be exciting because of the products which IT vendors are offering industry in order to help to tackle key manufacturing problems.

The need for manufacturers to get closer to consumers has spawned the concept of the extended enterprise in which not only suppliers, but also distribution, is included. For example, says Mr Williams, IT can be used by brewers as a means of viewing the hop-grower and also the public house as part of its enterprise.

Similarly, the generation of electronic point-of-sales data can produce a works order, and in turn create all the orders for materials and sub-assemblies. This would aid the lean production process, as manufacturers would only be making what their customers were buying.

All the technology to do this exists, says Mr Williams. Indeed, it is already happening to some extent in the food industry, and will start to happen very quickly in the process industries.

Mr Cliff Shuker, managing director of AT&T Istel's Rover division, sees an increasing need for IT applications that can be applied horizontally across processes rather than simply used to improve the performance of individual functions or departments.

Also, as customers increasingly dictate what happens in factories, they will use IT to inject their requirements straight into manufacturers' production schedules. Moreover,the development of massive databases provides the basis for neural networks which can aid decision-making by tapping into past experience.

IT users in manufacturing, too, have been thinking about the next steps in their use of manufacturing technology. The most important initiative among users is the AIT project – advanced information technology in design and manufacturing – which is headed by Daimler-Benz and stems from users' demands for more effective IT and better integration of systems at different sites.

The pilot phase for the project, which comprises 16 aerospace and automotive companies from six countries, began last November and the overall aim is to strengthen the competitiveness of key European industries by three consecutive action in three areas.

First, the initiative will seek to establish a consensus among European industrial users of IT on their most important future requirements for design and manufacturing.

Secondly, it will seek an agreement on these requirements with the IT vendors, and, thirdly, an IT research and development initiative will be launched to support the commonly-agreed requirements.

Significantly, the initiative's backers say they want it to become a substantial user force recognised by the IT community, to ensure that future products meet users' requirements.

Two other projects, combining users, vendors and universities, underline further priorities for the development of IT in the factories of the future. Just before Christmas, Crawley-based Reflex Manufacturing Systems, a subsidiary of Rolls-Royce Aerospace, won approval from the European Union for a project under the Esprit programme known as Discrete Cell Control.

Over the past five years, the adoption of manufacturing cells has grown rapidly in industry because of their contribution to flexible manufacturing, reducing work-in-progress and enhancing teamwork and multi-skilling.

Helped by an Ecu 1.3m Esprit grant, project leader Reflex and its partners will, over the next 18 months, develop an open applications framework aimed at providing a firm foundation for all cell control systems.

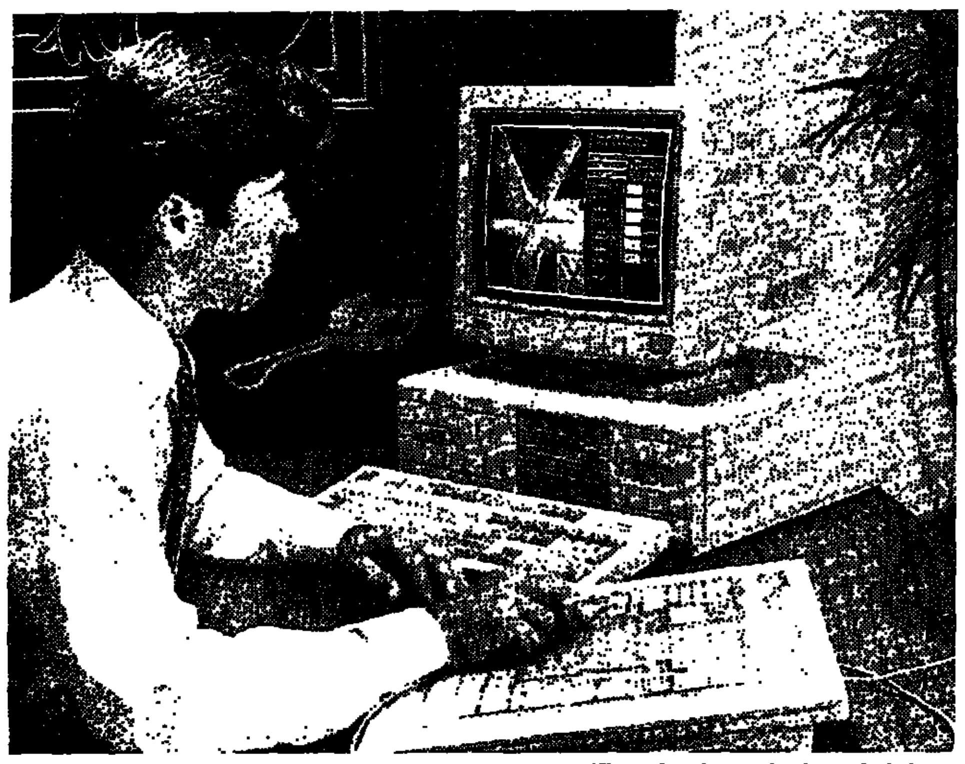
Reflex, a software house which specialises in manufacturing control and shop floor scheduling systems, says the DCC will provide the means to design and build systems, and empower autonomous cell operation, while enabling the cell to co-operate with other production and engineering teams.

Mr Terry Jones, managing director of Reflex, says the aim is a standard cell control environment which different IT suppliers can plug into efficiently. Internal and external customers would also be able to view where their products are in the cell.

The applicability of DCC will be evaluated through pilot projects at two of Reflex' partners in the scheme, Intracom, the Greek electronics and telecoms equipment company, and the Odense Shipyard in Denmark.

Odense, which has moved to cell manufacturing to produce super-tankers is also involved in a project being carried out under the auspices of the five-continent Intelligent Manufacturing Systems Initiative. This aims to work out how concurrent engineering – interdisciplinary teamwork to accelerate product development – can be carried out in a global manufacturing context.

TransTec, the Birmingham-based specialist engineering group, is leading the European side of the project. Like the Reflex project, it aims to design an architecture – in this case of a CE system for global, multi-site application.



Information technology vendors still see plenty of opportunities to fulfil the changing needs of manufacturing companies. Above: an aerospace engineer uses a power desktop Compaq PC, the Deskpro 486/33L, to carry out computer-aided design and engineering applications.

Keeping the goods moving: Band Three Radio is specifically designed for fleet communications between vehicles and their base. In addition to voice communications, it provides a range of data facilities such as the Radiotext service, featured above, allowing rapid transmission of text messages and reports

Stock control: in Bristol, a Rolls-Royce Aerospace engineer uses a recently installed Reflex computer system to check the inventory of fabricated aero-engine products. Reflex Manufacturing Systems, based in Crawley, is a software house which specialises in manufacturing control and shop floor scheduling systems. It is a subsidiary of Rolls-Royce Aerospace.



■ FAST SOFTWARE DEVELOPMENT

# Finding solutions takes time

**Object-oriented computing is widely acknowledged to be the future direction for software development. But discovering ways to build software fast is a painstaking process, says Philip Manchester**

In the ultra-competitive business world of the 1990s, a company's ability to create new information systems rapidly is a pre-requisite for survival.

The key is to find ways to build application software which are both flexible and scalable. Object-oriented computing, which sees an information system as a set of self-contained components, is the most promising approach and it is steadily gaining favour with both software developers and users.

Fast software development is a priority for both groups. A survey of delegates to last October's 'Objectworld' conference in the UK, for example, cited "flexibility to change" and "reduced time to market" as the two main reasons for adopting the object-oriented.

Object-oriented computing is widely acknowledged to be the future direction for software development and most software developers have pledged their allegiance to the cause. The Object Management Group (OMG), an industry organisation which promotes object-oriented computing, now claims 370 members and points to growing attendance at shows and exhibitions.

The object-oriented approach is making the running at both extremes and is central to any debate on speeding up the production of software.

There are several reasons:

□ Firstly, object-oriented systems are built from sets of components which can be re-used elsewhere.

This speeds up the development of new applications and makes existing ones easier to maintain.

□ Secondly, object-oriented systems operate in a way that makes software "portable" to other platforms and preserves investment in application software.

□ Thirdly, objects reduce the complexity of applications software by enforcing tight design disciplines.

□ Most importantly, object-oriented development techniques make it easy to build prototype systems to demonstrate to users – which is widely acknowledged as one of the keys to speedy application development.

"I think rapid application development is as much about the approach as it is about the tools you use," says Mr Vic Morris, UK managing director of tools specialist Powersoft.

"As far as possible you want to break the application down to make it easier for end users to do it themselves.

"If you look at what many users have done with their PCs – building complex applications with spreadsheets, for example – you can harness that talent," he goes on.

Thinking of applications in terms of objects is the key, according to Mr Morris.

"In the past, we viewed applications as a set of functions like, say, an order processing system. It was very structured. Now with objects, we can think in terms of business processes and put in place applications which can support them," he explains.

Mr Morris also places emphasis on the "scalability" of applications. This means, for example, an application program built for two or three users on a small network should be able to cope with hundreds – or even thousands – of users on a much larger system.

"We have recently re-positioned our Powerbuilder tool set to reflect this. So you can start with a cheap desktop version and move up to a full networked version and keep the same applications," Mr Morris says.

Other tool vendors have taken a similar approach because it can speed up production of larger systems if

Continued on facing page

## NEWS IN BRIEF

### Most finance directors are dissatisfied with data management

Despite the widespread acceptance of information technology, more than half of the finance directors in a recent poll of top companies are still dissatisfied with the quality of their current information management.

This is one of the findings of a survey by the independent research group, MRD, which targeted financial directors from 100 leading companies in the UK.

While more than half the companies are now using their own internal IT department's resources to develop their strategies for information technology, only 13 per cent say they use an external IT resource.

Together, these companies represented an investment in IT of more than £175m.

The survey, commissioned by European Software Publishing (ESP), says that 98 per cent of respondents felt that personal computers had made their work more productive, but the time-factor – not 'technofear' – was seen as the greatest restraint on the wider use of technology.

"Even though the technology is sitting on their desks, still relatively few managers are using the communications and information-sharing capabilities of information technology," adds the report.

"Large amounts of their day are spent in communicating – meeting, telephoning, and so on – with their workgroup colleagues, but few are fully using technology to support and enhance these activities."

*More details on the ESP Report from Sarah Howe, A Plus Group on 0753 790 700.*

### Outsourcing contract with Ford of Europe

Ford of Europe's parts and services operations division has signed a five-year outsourcing contract with Computer Sciences Corporation (CSC), one of the world's leading suppliers of IT services.

CSC will provide Ford with IT services throughout Europe and take responsibility for applications development, sales analysis and accounting.

CSC won almost £1bn of outsoucing business in Europe last year.

### Pioneering with the cordless office

While most office workers are still 'tied to their desks' by fixed telephones, a new generation of cordless telephone systems is set to open up a market worth up to $5bn a year by 1998, according to Ericsson, a pioneering company in this sector.

Ericsson began developing business cordless phone systems in the mid-1980s and claims to be the first company to launch a DECT-based system, last year.

This Freeset system works as an "add-on" to a company's existing phone network. Low-powered radio base-stations are installed throughout the premises, and controlled from a radio exchange, which connect directly to the host telephone system. The main groups of users are organisations with a large number of mobile staff – such as hospitals, factories and exhibition centres – where instant communication is important.

The second main group of users are companies which are trying to redefine the nature of office work, applying the 'hot desk' principle. Digital Equipment Corporation, using the Freeset system, has been successfully experimenting with a similar concept which it calls 'the natural office' at its Swedish offices in Stockholm.

"Once people start using a cordless phone at work, it's impossible to take it away from them," comments Ericsson's Hans van der Hoek. In five years' time, he expects one-third of all business phones sold will be cordless.

### Digital's investment in Scotland

Digital Equipment Corporation, a leading supplier of networked computer systems, has announced an investment package of more than £90m for its Scottish manufacturing sites in Ayr and South Queensferry.

Mr Chris Conway, managing director of Digital UK says this investment confirms the company's commitment to manufacturing in Scotland where it makes a range of products from silicon chips to implemented computer systems – "half of Digital's revenues come from Europe and the UK leads the field in both sales and manufacturing," he adds. Digital's total investment in Scotland stands at £300m.

The latest investment package involves more than £65m for the South Queensferry facility. This will increase production capacity for the Alpha AXP silicon chip.

### Quicker calls for Whitehall

GPT Communication Systems has won a large order from the Central Computer Telecommunications Agency (CCTA) for the supply, installation and maintenance of a new computerised telephone directory serving all 62 government departments in Whitehall.

The new system enables operators based in the Treasury to reduce response times significantly for about 5,000 enquiries each working day.

Mr Peter Spencer of the telecommunications division of the CCTA, explains: "With over 30,000 people working in more than 60 different departments, our original system of using up to 12 paper directories had become too slow and cumbersome, with an average response time of 25 seconds – too high for what is essentially a public service."

The new system allows the CCTA to locate individuals and redirect calls in a fraction of the time, eliminating caller-frustration, he adds.

### New paging system for Dutch prisons

The Dutch group Teletechnicom and the Swindon-based company Blick Telefusion have won a contract to upgrade potentially life-saving radio-paging systems installed in Dutch prisons.

Since 1986, the two companies have held the contract to supply radio-paging systems to 30 of the 45 prisons in Holland. But an unprecedented series of attacks on prison guards forced the Dutch ministry of justice to put out a tender for a more sophisticated system to be developed.

Hostage situations have resulted in serious injury and even loss of life. The new paging system is marketed abroad under the title, Bodyguard. Location signals can be sent out by the pagers each time a guard passes one the many location code transmitters installed in prisons buildings.

The pagers also register the last two loctions of the user in case of emergency and loss of contact. This data is relayed to a computer terminal programmed to show the location of all guards, using a schematic display of the prison.

Others features include a "man down" alarm, triggered by a floating mercury switch, a silent hostage alert button.

**Michael Wiltshire**

■ SYSTEM SECURITY

# Weak links mean big risks

**As increasing amounts of data are moved around the world, the need to maintain security integrity has become paramount, writes Martin Banks**

There is a direct relationship between the number of information tools used by a company and the chances of its information system being insecure.

A singleton PC used at home can be the victim of the occasional virus, which is often irritating to the user but rarely fatal to the system or the information. For a company with multiple, linked networks of PCs, workstations, departmental servers and enterprise repositories, however, the potential risks can border on the incalculable.

The PC has moved from being little more than a toy used for tactical personal productivity applications to become one of the key strategic tools for delivering meaningful information to users. As such it has moved centre-stage in the on-going struggle to keep information secure and systems up and running.

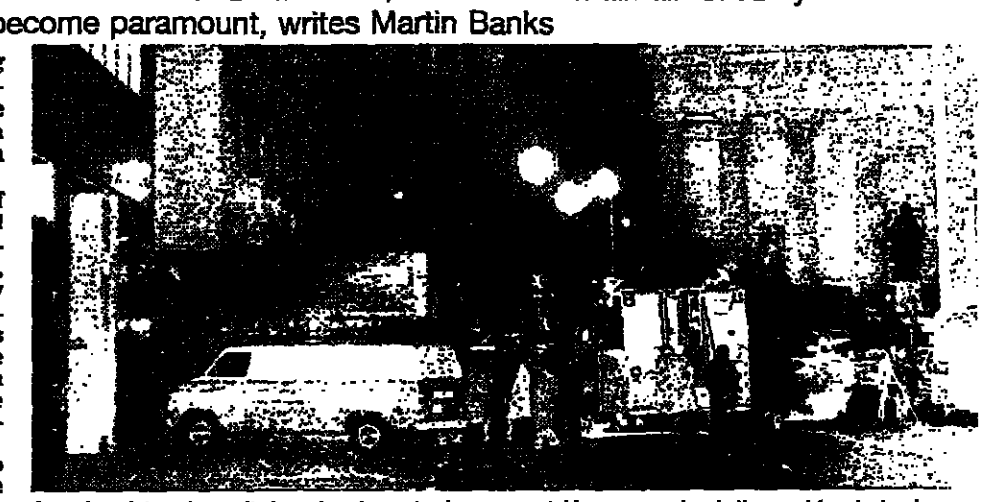
The problem is, of course, that the PC's history contains nothing to associate it with the concept of security. As security consultant, Robert Schifreen, suggested, even DOS, the PC's native operating system, can be readily re-written to make the machines a source of secure information.

"For example, it is possible to embed code in the operating system that will log all keystrokes made on a PC," he says. "In that way, log-in sequences and passwords can be recorded for later use."

As increasing amounts of sensitive data are moved around the world using data-communications technologies, the need to maintain security and integrity becomes paramount. This not only affects how users should view the weak links in their information systems – predominantly the PCs being used – but also security at a higher level.

Until now this has started to look like a problem solved. The US Government is, however, currently considering throwing what many see as a large spanner in the works, in the form of what is generally referred to as the Clipper Chip technology.

Currently, many companies regularly employ a data encryption technology known as DES (the Data Encryption System). This is one of several alternatives that are, ironically, published specifications. This would seem to degrade their value, but as Schifreen put it: "Everyone knows how DES works, but it is not easy to crack. It can be done, but it would need a team of programmers a year and a Cray super-computer to do it. By being a published specification everyone knows the weaknesses of DES and works to plug them."



Apart from internal security breaches, larger businesses are taking more seriously the need for electronic back-up services in the event of sudden disruption to their information networks. Pictured here are police vehicles near the New York Stock Exchange after security alarms in Manhattan's financial district

A security centre, above, using Philips Telecom control equipment. Reports by the National Computing Centre show that more than half of UK organisations in a survey had suffered "a significant security breach" in the past five years. More than two-thirds of companies had not conducted a risk analysis of their information technology systems. The most common physical threat to a company's IT system is power failure, with an average cost of £9,000 per incident. The average cost of an equipment failure incident was £12,000, according to the survey.

The US Government is currently considering an alternative to these encryption systems, based around a hardware chip, known as the Clipper Chip, which would contain the encryption algorithm. A company using the chip would then be able to pass encrypted data to any other using the same system.

What has upset users, according to Schifreen, is the fact that the US Government is considering passing use of this CIA-developed encryption technology into law. All US data-communications users would then be legally obliged to employ Clipper, which would mean that recipients around the world would also be obliged to use it. What makes the situation worse is the fact that Clipper is a proprietary system, and that the CIA has written a back door into the technology allowing information to be decrypted.

The fear is that, either through theft, or the actions of a disgruntled employee, this code could fall into the wrong hands. Another fear is that, because it is from the CIA, the backdoor code may be made available to other national authorities.

Perhaps most important of all, however, is that because it is a proprietary solution, its method of working and its weaknesses remain unknown. As all encryption systems are ultimately breakable, this is being seen as a serious potential weakness of the system.

As PCs become more prevalent as a strategic tool, other weaknesses may serve to compound the potential problems of Clipper encryption. For example, access control on PCs is still a weak area, though there are now products available to solve the problem, if companies are willing to make the investments necessary. This may be significant, for the most comprehensive solutions can cost up to £1,000 per PC.

Many new PCs come with access control available as standard, but these tend to be simple password systems where the password is stored in a battery-backed CMOS memory. Removing the battery, therefore, will normally circumvent the password.

ment in security is a key factor not always considered by users. This starts with education about the simplest access issues. For example, it is rare for thought to be given to individual passwords and most people make obvious choices. "Many users choose words like FRED, SECRET, PASSWORD and LETMEIN," Schifreen said, "which are easy to guess."

Even Unix systems, increasingly popular both as workstations and servers, suffer access control weaknesses. For example, there is a well-known bug in Unix Mail which will allow embedded code in a mail message, which runs when the message is read. The code can, for example, request the system to transmit the receiver's password file back to the sender.

It can also be used to transmit a complete system's password listing. This contains user IDs and their apparently safely encrypted passwords. There are, however, shareware products available – such as Websters, a program with 234,000 unique English words – which, when passed through the Unix encryption algorithm, will produce a table against which the encrypted passwords can be compared, and cracked. Using numerals in passwords usually helps solve this problem.

Many such routes into systems can be trapped with sufficient thought and planning by users. For example, an increasing number of these programs are now available from Bulletin Board Systems, so access by staff to such systems must be closely monitored, particularly on the larger networks. One way of doing this is to audit the applications being run.

There is now a new class of application appearing that scans all the disks on a network to locate and report on all applications found. This should include those that are hidden behind filenames that do not include the standard applications file extensions such as .exe, .com and .bas.

In this way, systems managers can know the location of all approved applications, as well as those that are not approved. The benefits of this are two-fold. Not only are potential security risk applications identified. It also ensures that no illegal copies of applications are being used, preventing possible legal action by the application's authors.

# Rise of object-oriented technology

Continued from previous page:

you can start with small ones and "scale" them up.

"All our tools are based on Smalltalk so you can move from our desktop product Enfin to our corporate Synchrony product," says Mr Jeff Sutherland, vice-president of object development at software tools company Easel.

"But it is not enough just to scale up to a large number of users. You need greater access to database and tools which can deliver the performance.

"We see the answer in tools which will do 80 per cent of what a user wants automatically. The users can then concentrate on the bits they understand best – the business objects," he says.

Mr Sutherland believes that not enough is being done to promote object technology at the application level. He is part of a group of software developers pushing for the specification of business-based "objects".

"We have a problem at the moment with object-oriented technology. People talk a lot about code re-use – but where is it?

"We see the need for re-usable business objects which can give different views of the way the business operates to different users," says Mr Sutherland.

There are other, more serious, reservations about the use of object-oriented design for speeding up software – initially, at least.

"Although object-oriented is the way forward, it is not a panacea. It's a solid framework to build re-usable code," says Mr Paul Burford, a systems engineer with object-oriented tool specialist Next Computer.

"In the short term, it is not a quick way to get more out of programmers. Although it reduces the number of lines of code you need to produce, there is much more design input needed".

Mr Burford cites the example of the Swiss Bank which used Next's Nextstep object-oriented tool to build its systems.

"When we started at Swiss Bank four years ago we wrote objects that were not re-usable so there was no advantage. But they recognised over time that they had chunks of re-usable software," he says.

"If you take a new environment it will never be quicker to start with because of teething problems. But by taking an object-oriented approach you have a chance to start putting in new features in a more natural way".

While object-oriented design techniques provide a suitable framework for building applications, the real productivity benefits come from software tools.

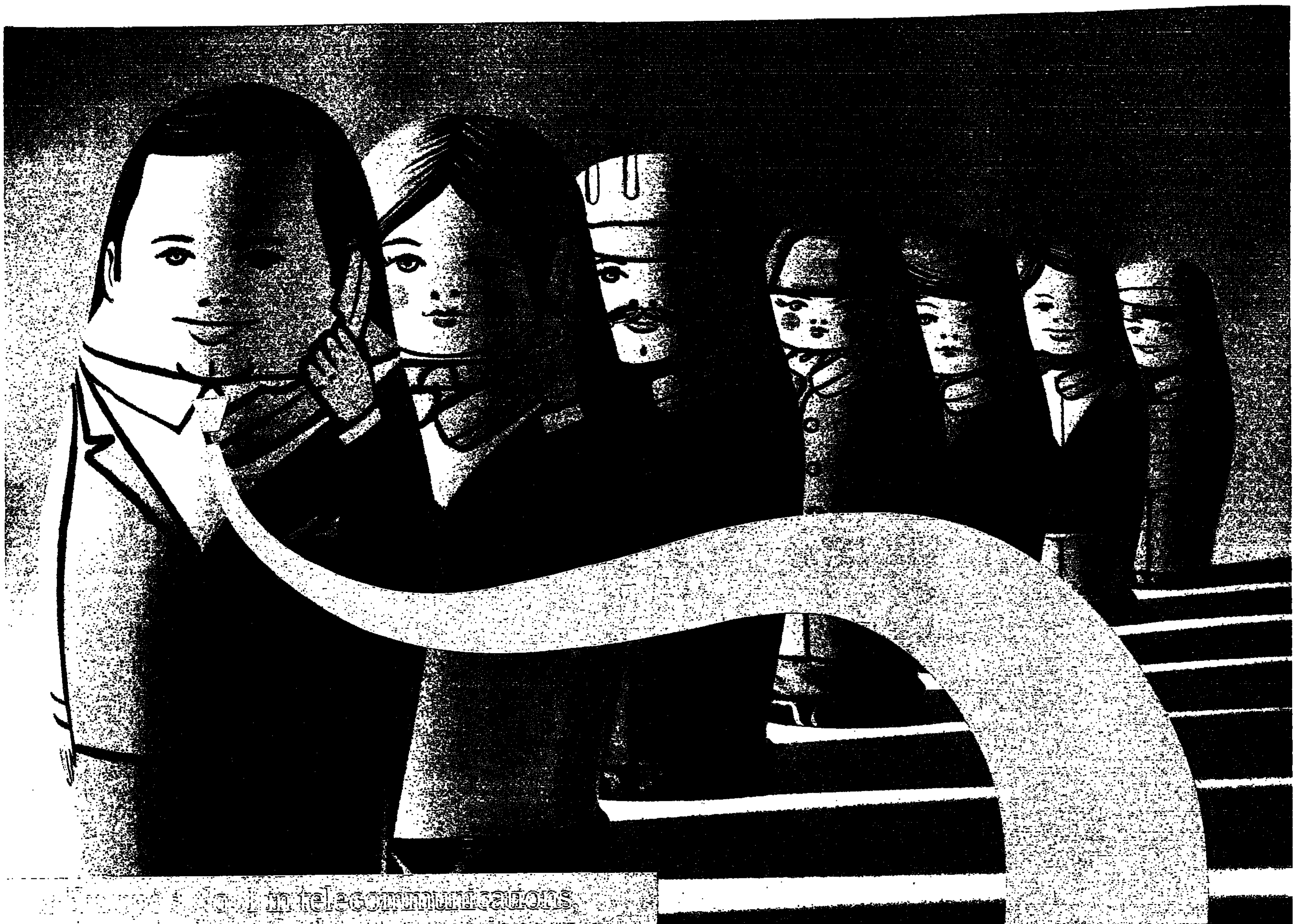
Strategies for selecting development tools differ – according to the size and data processing heritage of the individual company.

Larger companies tend to bring in programmer productivity tools so that their information systems departments can respond more rapidly to users' demands.

Smaller companies give their users their own desktop tools. Many companies combine both of these approaches.

The result is a growing demand for tools which can support fast software development and there is no doubt that these tools will use object-oriented computing as a starting point.

What is clear, however, is that finding ways to build software fast, takes time.



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More than 450,000 users around the world do business on uniVerse. It runs on over 70 Unix-based platforms, from over 25 major vendors, and on Microsoft Windows NT and Novell's UnixWare.

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A leader in the development of Open Systems, ICL is an information technology company specialising in systems integration in selected markets. Operating in over 80 countries worldwide, with 24,000 employees, ICL generated revenues of about £4 billion in 1993.

ICL has developed a culture of change which has resulted in a flexible and responsive organisation. It's principal activities are now grouped under three businesses.

- INDUSTRY SYSTEMS businesses specialise in systems integration in the retail, financial services, public administration, travel and transport, manufacturing, utilities and healthcare markets.
- A comprehensive range of SERVICES to help our customers exploit their IT investment. Facilities management and enterprise-wide support are provided for products from all major international hardware and software suppliers.
- TECHNOLOGY businesses supply our customers and trading partners with a Client/ Server bases range of hardware and software products. These originate from our own substantial development programme, our relationships with partners and our links with Fujitsu.

## Xi SOFTWARE

Xi Software Ltd

Xi Software has been developing systems management software for the serious commercial Unix user since the mid-1980's. Xi specialises in three main areas, print spooling and document management, batch job scheduling, and back-up/archive/recovery software. Such facilities are a requirement for any business user moving to Unix.

Xi-Batch is a Batch Scheduler with screen-based interactive job queue control, comprehensive job dependency and interlock facilities. Xi-Text is a Print Spooler and Document Manager with interactive job, printer and form control facilities. Both products are available with X-Windows Motif, Microsoft Windows and character based user interfaces. They also have extensive TCP/IP network support.

Xi-Bar is a back-up, archive and recovery system. It provides automatic, manual, full and incremental backups of files, plus off-line-line archiving and integrated recovery.

Xi's software has an excellent reputation for function, performance, and robustness, with over three thousand world-wide users.

For further information please call +44 707 371405

## COMTEC

·comtec· COMPUTER TRAINING

Comtec is one of the UK's largest independent computer training organisations. Courses for end-user and IT professionals are provided in the Unix, Windows and MS-DOS environments at centres in London and Leeds as well as on-site. Open Systems computing requires intelligent, practical and reliable training support. As a Trading Member of UniForum UK, Comtec is firmly behind the Code of Practice (which includes the Training Procurement Guidelines) designed to help buyers and sellers implement enterprise-wide computing successfully. Quality marks are given by the majority of the 200 courses on the Comtec 'User' and 'Professional' Software Training Planners being accredited by all the leading software houses and a corporate commitment to BS5750. Overall, after 12 years, it is the high quality independent standards and solid track record of the Company which make it such an excellent choice for training on multi-vendor installations. Over 50% of Comtec projects are now carried out as tailored training programmes of this sort.

More information on 071 224 2468.

## UNIFORUM UK

UniForum UK

Established in 1983, UniForum UK is an independent not-for-profit user organisation, whose prime function is to assist British business and government with the adoption of international standards in computing and communications systems (Open Systems). With over 1,200 voting members in the UK and affiliations with comparable organisations in over 20 countries, UniForum UK achieves its objectives by providing unbiased information, publishing Open Forum magazine monthly (with a circulation of 10,200), an annual User Casebook (a compilation of application case studies) and the Guide & Directory now in its fourth edition. In addition, the organisation publishes a Code Of Practice And Trading Standards, organises Seminars and Events, sponsors the Blenheim Online exhibition, ENTERPRISE IS (Earls Court 2, London, 18-20 October 1994), negotiates on behalf of its members discounts on publications and events and represents the organisation's interests in international affairs. If you feel that you or your organisation, would benefit from membership of UniForum UK call 081 332 0455 or fax 081 332 0448 for an information pack, without obligation.

## DIGITAL

digital™

With workstations that lead the industry in price/performance and multi-user systems catering for as few as two or more than 1,000 users, Digital is emerging as a leader in the commercial Unix market. We offer a wide range of Unix platforms based on our award-winning Alpha AXP microprocessor. Recently, IS managers surveyed by Computer-World rated Digital's Unix as "the most open Unix" based on compatibility with interface standards, application portability across multiple hardware platforms, support for open communications standards, interoperable support and other key criteria. Our commitment to Unix is demonstrated by the fact that Digital has invested more in Unix engineering than in any other area of technology. In October 1993, we laid out plans for providing full commercial Unix clustering by 1996, and we are the only Unix vendor to offer this capability. Since April 1993, the number of applications available on Digital's AlphaAXP Unix systems has grown from 100 to 2,500, the fastest growth of applications on any platform in the history of computing. In addition, several OEMs - including Olivetti and Cray Research - are now building their Unix plans on Digital's Alpha AXP.

## PERITAS

PERITAS
An ICL company

Peritas is one of Europe's largest commercial training organisations, with training available worldwide. The company runs on average 80 scheduled training courses each week of the year in addition to bespoke and on-site training programmes for its 3000-strong customer base.

Peritas is also the UK's largest Open Systems trainer with more than half its course portfolio dedicated to Open Systems training. The company's Unix courses were among the first to receive accreditation by Unix International. Its comprehensive range of Unix courses address management, support and development requirements. In addition to its generic Unix courses, Peritas also offers training for AIX, Solaris and SCO Unix environments. Other portfolios include relational databases and networking. With 25 years experience in the training industry, the £20 million company, part of the ICL group, offers a complete training service from IT to management training, and full serviced training facilities.

Call Peritas on (+44) 0753 851483

## STAFFWARE

Staffware

Staffware is the leading independent workflow automation system, authored and distributed by Staffware Plc. The company pioneered computer-based workflow automation as early as 1984, and currently has 30,000 users of Staffware worldwide - an achievement which has been recognised with a Queen's Award for Export. Staffware is integrated with other software products, including databases, electronic mail, text and image processing, and general office applications. Staffware has been adopted as part of their strategic client server offerings by a number of major organisations, such as IBM, ICL, Unisys, Bull and Data General. The company also has strategic alliances with Uniplex, Novell and Lotus Notes.

Server versions cover all the popular Unix platforms, with support for character based terminals or Windows as clients.

Staffware Plc, 46 Chagford St, London, NW1 6EB
Tel: 071-262 1021
Fax: 071-262 3956

Staffware Corp, 70 Walnut St, Wellesley, MA 02181, USA
Tel: +1 617 239 8221
Fax: +1 617 239 8223

Staffware, Otto Volgar Str. 5a 6231 Sulzbach/TS, Germany
Tel: +49 6196 50030
Fax: +49 6196 500310

## STAYAHEAD

StayAhead Training is an independent training organisation based in London, specialising in Unix, Uniplex, Informix, C and C++ Programming training.

Scheduled and customer courses are now standard in the industry. StayAhead not only support this approach, but have grown an excellent reputation among their many prestigious clients, who have continually used StayAhead's ability to tailor training to meet their specific requirements.

If your staff aren't performing to their maximum potential, you're losing money. Investing in a training course is not money spent, it is money invested. Naturally the better the training company you choose, the more chance you have of maximising your investment.

StayAhead Training are building a reputation of supplying no nonsense, value for money training. With an excellent instructor/delegate ratio and with envied repeat business, we're a name you're going to hear a lot more of.

To Unlock your Full Potential ring StayAhead Training on 071 922 8833

## ORACLE UK

ORACLE

Oracle Corporation was founded in 1977 to develop and market the first commercially available relational database management system. Since then, Oracle has become recognised as a leading International supplier of information management software and services. Oracle has grown to become, by revenue, the third largest independent software vendor in the world.

Oracle UK, established in 1984, is a wholly-owned subsidiary of the Oracle Corporation, and markets the complete range of Oracle products and services throughout the UK and Ireland, through direct and indirect channels.

Over the years Oracle UK has consistently added value for its customers by offering a range of complementary products, consulting, training and customer care services, and is now one of the largest UK software suppliers. Customers receive sales support from one of the 8 UK offices and the Dublin office. Each office is equipped to reconstruct application conditions and provide appropriate solutions.

## IST

IST IMPERIAL SOFTWARE TECHNOLOGY

Imperial Software Technology Limited is a world leader in software engineering technology for Open Systems. IST is committed to designing, supplying and supporting leading-edge software tools to the builders of mission-critical systems world-wide.

The company's flagship product is X-Designer, a Graphical User Interface builder for Motif. X-Designer is used by many Financial Times 500 and Fortune 500 companies and has just won the coveted Advanced Systems Best Product of the Year award.

IST's workbench technology is packaged and marketed by computer manufacturers and software vendors as part of their application development environments.

The Advanced Technology Group specialises in the application of formal specification methods to safety-critical and high-integrity software systems. IST's ZOLA Z-language system is used by major companies, government agencies, universities and research establishments world-wide.

IST's origins go back twelve years to Imperial College, London. The company is based in Reading, with offices in London and Cambridge.

## DIGITAL

KNOWLEDGE

Systems support is regularly identified as a major problem in multivendor Unix implementations. This is another area in which we excel. Recognising that traditional Unix training does not solve the problem because it is specific to one vendor's version of Unix, Digital Learning Services offers true multi-vendor Unix training, including:

- Lecture-based training for developers and support professionals in all major Unix variants.
- Customised on-site training
- Course development and implementation
- Professional skills training that is job focused and task oriented.



# PROFITING FROM OPEN SYSTEMS

UniForum UK

A Review By UniForum UK
16th March 1994

UniForum UK

## INSIDE



To receive your free monthly subscription to UniForum UK's magazine, Open Forum, fax 081 332 0448 for a registration form.

Open forum

## Future-Strength open systems is the key to business

by Geoffrey E. Morris,
President and CEO, X/Open

Businesses around the world have a choice. Either they open up their information resources or they prepare to close down.

The next Millennium isn't going to be business-friendly to those who ignore change.

The information deluge is about to hit us. Within only a few years we will see information begin to pour out of palm tops, mobile systems, TV set tops and networks in the air. Information packaged for individual consumers, whether the demand is corporate, social or personal.

Future-strength open systems - continually incorporating new worldwide standards - are critical to this progress. Without practical, common standards between the technologies, the information databases, and the networks, the future will be more a technological Hades than an information haven.

The world's businesses and governments are now getting the message. In ten years open systems have already become the industry mainstream - solving the problem of incompatibility in computing on a massive world-wide scale.

X/Open surveyed thousands of customers of information systems across five continents in 1993 about their buying patterns for the next three years as part of its annual Xtra market requirements service. The results show the global open systems market is exploding - from the desktop to the mainframe.

The world's major businesses report their external spending on open systems will dominate 58% of the world market by 1996 - accounting for almost 60% of U.S. external information technology (IT) expenditure, 36% of spend in industrialised Asia, and 70% of IT spend in Europe. For two-thirds of those companies, client server applications are the top priority in helping to meet their business objectives. Open client/server systems and applications are now sweeping through organisations, devolving power, distributing on-demand information where it's needed, and changing business processes on an unprecedented scale. Those customers are not only benefiting from increased choice and better value in procurement, but also from the easier use of technology, and greater flexibility and effectiveness from their IT solutions.

That's why the world's computer systems and software suppliers now recognise the urgent need to take open standards to market as fast as possible. Without standards their resources will be deployed solely to maintain past legacies, which represent a dwindling customer base. With standards their products and services will become more attractive to customers. They will avoid the costs of re-inventing technology that already exists. They will have more resources available to innovate for their customers. They will be able to reduce time to market for their products. And they will be running vibrant healthy businesses which directly benefit their customers, employees and shareholders.

Their whole future now depends on their ability to meet ever tougher customer demands, and to attract higher levels of standards based open systems investments in the years to come.

Last year hundreds of suppliers worked together to develop the Common Desktop Environment and the Unified Unix Project for delivery to X/Open's Fastrack specifications service. Unix was also given its own independence, with Novell announcing its intent to transfer Unix licensing to X/Open on behalf of the open systems industry. All of these developments represent major extensions to the world's open systems platform, and are scheduled for delivery to the world market, fully approved under the X/Open brand, during 1994.

Other groups are already working to create new standards for the innovative consumer technologies ahead of us - object technologies, multimedia, TV set-tops and embedded information and control systems. Some of those groups are working at a product level, some at a technology level, and some at an industry level.

What they must all now realise is that only by working together can the future deliver on the promise of information on demand and provide real consumer value to a mass market of information users.

Developing future standards cannot be managed as a short-term marketing support activity by any corporation to attract commercial partners or covet start-up market share.

Future-strength open systems will be built on long-term customer value - driven by business demands, adapting rapidly to innovation, agreed industry-wide, and delivered independently to the world market in the shortest possible time.

That's what business customers need from our industry. Open systems are now an integral part of their information future and are too important to the world's business and economic growth to be gang-led.

Amid the information deluge of the years ahead, future generations of information consumers will hold all of us responsible for how we manage the next stage of mass market open systems development.

Geoffrey E. Morris,
President and CEO, X/Open

## Open systems: more than just UNIX

Richard Jaross,
Executive Director,
UniForum

UniForum represents the interests of computer professionals who are or will be using Open Systems. Just a few short years ago that statement would have read "....using Unix".

Much has happened to Unix, but from the standpoint of UniForum the most significant development has been that Unix has arrived; it's all grown up and is embedded throughout information systems at the corporate and industrial level, worldwide. Its acceptance as the computing model of choice for users seeking interoperability, scalability, and robustness is no longer in doubt, and the only remaining question is how fast and how effectively it will expand its penetration into the installed base, and how universally it will become part of all new computer installations.

So, when I speak now of Open Systems and UniForum's role in fostering them, what do I mean? Simply put, an open system makes it possible for users to run their applications seamlessly across computer platforms no matter who wrote the underlying systems software or who made the computing hardware. The ability for users to do this has been long promised, and in many respects achieved in part. That we are approaching a truly "unified Unix" is cause for celebration in our industry and is something our organisation has contributed to.

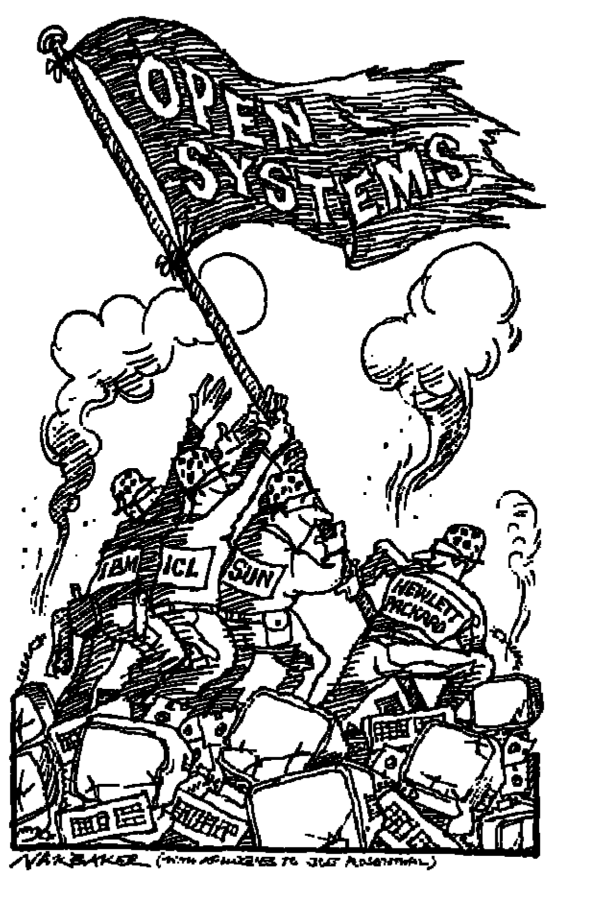
Our emphasis as a membership organisation has been on the end user, providing them with products and services at the local level via our network of 32 international affiliate groups, and on a global level through our publications, seminars and on-line access. Our philosophy has been to champion the needs of those who are seeking to increase their information systems effectiveness through the use of Open Systems. UniForum puts this philosophy into practice by providing educational forums where vendors and users cannot only meet but where they can learn from and cooperate with each other. Cooperation of this sort has been in short supply and has meant growing pains for the industry (especially for users and independent software vendors).

It is not really surprising but worth noting that the interests of Open Systems vendors and those of the end users are not always the same. The desire to own and profit from a certain "flavour" of Unix has been irresistible to Unix vendors from the start (claims of interoperability notwithstanding). The chorus of complaints from user who are not seeing the benefits of openness was not well heard by a highly competitive vendor community.

As Open Systems are now integral parts of the computer system, the chorus of user complaints has changed to a chorus of user demands. It now seems apparent that these demands are being heard. The proof is seen in some of the developments of the past year: a Common Operating Software Environment (COSE) was announced by leading industry vendors. A broad based attempt to unify Unix was recently announced, and the "owner" of the Unix trademark, Novell, has given exclusive license of it to X/Open Company, Ltd., to provide for its more rapid and unified adoption by all Unix-systems providers.

UniForum's role in all of this has been to facilitate and promote the cooperative alliances being forged among vendors, users and the independent standards and branding groups, like X/Open. Our contributions have included the publication of original documentation from the COSE vendors. We co-sponsored a software developers conference for 1,000 independent developers and users for them to see first hand if the common desktop environment was a reality. It was. We are, at this very moment, hosting the World of Open Systems at our annual UniForum Conference and Trade Show in San Francisco, California. This largest of all Open Systems gatherings brings the entire Open Systems family together to chart the course that we as an industry are likely to take.

The future of open computing is bright. I need only look to growth of such Unix-based breakthroughs as the Internet to know that the development of the next great advance in computing will also spring from the Open Systems family.

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UNIPLEX CASE STUDY: The Foreign & Commonwealth Office

# Five year Open Systems strategy starts to pay off

The Foreign and Commonwealth Office is an organisation of some 12,000 people including locally engaged staff located in approximately 250 locations around the world. Because of the difficult security requirements, the FCO had not invested heavily in IT in the early 80s. Systems had been installed on an ad hoc basis, primarily under BOS for its portability and under DOS for its availability but no clear strategy had been followed. In fact, it was estimated that in 1987 at least 10 different WP systems were in use alongside various operating systems, hardware platforms, purchased applications and bespoke systems. This was a result of reactive support for user requirements rather than strategic planning.

Early in 1988, the FCO adopted an Open Systems technical strategy. By 1992, following an extensive analysis of the IT requirements of the organisation, the Foreign and Commonwealth Office (FCO) published a five year Open Systems IT strategy document.

It was necessary that the Open Systems strategy met a number of specific needs arising from the unique nature of the overseas FCO operations. Supplying, installing and supporting systems in such diverse locations has to be made as simple and cost-effective as possible. The security requirement is paramount and the 'need to know' policy dictates that individual groups at posts, or departments may have no authority to interrogate data held on any adjacent system.

Commenting on the requirements, Jeffrey Ling, IT Director at the FCO said: "To summarise, the FCO needed a common user interface style for all applications throughout the organisation to obtain the goal of little or no retraining; high system availability around the world; internationally available software and support and finally, adherence to standards to enable integration."

The strategy therefore entailed the implementation of POSIX compliant office systems to replace existing BOS/DOS systems and the introduction of similar systems into secure areas with the requirement that wherever posted an individual would need no retraining.

When adopting an Open Systems technical strategy, the FCO selected Uniplex to supply the office automation software. Informix to supply the database and BRS Search to provide free text retrieval.

Now, two years into the five year period, the strategy has proved to be correct with many business benefits realised. These include cost savings through compatibility across hardware and software platforms, the utilisation of off-the-shelf packages and the adherence to standards. In turn, this has helped eliminate the risks associated with the ongoing support of bespoke packages. Lastly, the freedom to pick and choose suppliers has increased and the dependence on existing suppliers has been reduced, and brought substantial financial benefits through competition.

The most valuable internal benefit of having a published five year strategy is that the end-user department can see that there is an ultimate goal. According to Ling, "It is only human nature to demand the newest, latest gadget but within the FCO the IT organisation has so far gained immense credibility for delivering the strategy that the organisation needs whilst keeping the individual customers happy.

"The approach taken has been to use not leading edge technology but systems that are proven to support such a complex organisation. The system has to be simple enough for widespread use in remote locations but robust and sophisticated enough to address the security requirements of highly sensitive international communications."

The system has facilitated a significant change in working practices. As systems and user interfaces are consistent and compatible around the world, a mobile officer can be confident that a document composed on a laptop whilst travelling can be easily and securely communicated back to the UK on arrival at a post.

By the late 1990s it is planned that there will be a worldwide interconnected POSIX compliant office system throughout the FCO for the processing and transmission of both secure and non-secure documents. This will also be extended to provide secure communications with other government departments.



## UniForum UK hosts monthly briefings

A new series of half-day briefings to be held in London, and other locations should there be sufficient demand, is now being promoted by UniForum UK. Under the banner of "Open Forum", the purpose of the programme is to widen the message of Open Systems computing.

The format of each event will combine formal presentations and panel sessions with impromptu discussions. It is hoped that the programme will foster a 'club' atmosphere and provide a regular meeting place for delegates to learn more about the particular subject under review, and to also discuss individual matters with their peers.

Each briefing will cover one particular topic and it will be targeted at a particular audience, such as top management, IT professional or users. It is the intention to cover topics of wide interest, such as WindowsNT, COSE, mission critical, workplace and distributed computing. The briefings will be open to both members and non-members and will be run as a service to the IT sector. To this end the cost to delegates will be kept to a minimum - £70 for members, £90 for non-members, both prices being inclusive of VAT.

For more information contact UniForum UK on 081-332 0446/0455 or fax 081 332 0448

STAFFWARE CASE STUDY: Barclays

# Customers Count at Barclays Financial Services

Barclays Financial Services (BFS), with 3,500 staff and 1,500 sales people is one of the UK's most successful financial services organisations, dealing with everything except personal banking.

The company came to Staffware workflow automation via document imaging, after it installed a system at its Croydon-based general insurance office to scan and digitise new business documents, such as customer correspondence, policy forms, and so on, so that they can be distributed around the organisation electronically.

It was soon realised that the imaging system, although a significant step forward in document handling, did not get to the root of the problem of how to control and organise the flow of these electronic documents from one member of staff to another. The solution was Staffware. Now, as soon as a document is received, it is scanned and indexed, following which, rules written into the Staffware program determine who needs to see it. A routine request for a claim form might be sent to a clerk, for example, while a customer complaint would be directed to a manager. A memo can be attached to a customer document outlining what action is to be taken, by whom, and by what deadline.

The system sets reminders and provides a full audit trail of what actions have been carried out. For example, if a letter to a customer is not responded to by a certain deadline, a reminder is generated automatically.

One of the main benefits of using workflow automation is that Barclays Financial Services has become more flexible in the way that it runs its customer service department. The system has made it easy for anyone serving the customer to retrieve documentation online, without the problems associated with more than one person at a time having access to a central file.

Staffware is now being implemented at the company's Stratford and Peterborough offices for managing investment, tax and trust business, and it is expected that around 450 staff will be using workflow in due course. Currently, around 2,000 transactions per day are being handled by 200 users on two systems servers.

General Manager Jennifer Condon, outside the OPENframework Centre in Dublin. The centre, established by ICL, specialises in the delivery of state-of-the-art, imaginative solutions to the business problems of clients from all over the world. Jennifer's highly skilled team focus on the usability and potential for change of the systems they deliver. Some of the key technologies they use include Object Orientation, Graphical User Interfaces, Multimedia and most recently Smart Cards.



# Open Solutions for the Enterprise

by John Coon, Marketing Director, Data General Ltd.

In the past, the enormous sums invested in information technology have been targeted at existing processes - doing things faster, more accurately and more reliably. Most organisations still conduct business using the same procedures through departmental structures that remain largely unchanged.

Technology has now advanced into a new arena enabling companies to reassess the ways in which business is conducted. Alongside this technology 'push', customers are imposing their own pressures for change with a new awareness of quality of service and price.

Across Europe, many organisations are already using the latest advances in information management to change business processes, often tackling activities in ways previously thought impossible. The redesigned processes are giving these organisations significant market advantages.

It is in this environment of change, to achieve competitive advantage and more efficient and effective business processes, that Open Systems technology is playing a key role.

Business productivity, the quality of customer service, and ultimately company profits depend on the activities of staff and management. Staff with ready access to information are motivated and empowered to perform effectively. If managers can also provide the freedom to exchange knowledge and experience, the entire enterprise is able to function as an efficient, cohesive unit.

Open Systems and Client/Server computing are a natural fit with these business objectives and as a result are becoming the agent for cultural change, acting as a catalyst to empower local staff and focus activity around the needs of customers.

The flexibility allowed by compatible, Open Systems and the comprehensive range of products which easily work together, allow new technology to be introduced in pace with the identified business change.

Advances in the way data is stored and managed is facilitating enterprise-wide access and use of information, deploying the key data to the parts of the organisation driving decisions and management. Moreover, certain technologies that were considered to be only part of the "proprietary" world are now readily available, tackling such issues as enterprise-wide administration and high-availability - essential considerations of any large systems investment.

As systems continue their rapid improvement in performance, new applications for enterprise server and client-server processing are possible and the business benefits of Open Systems technologies are a reality (rather than just a promise) across a diverse range of industries.

### Open Solutions at Work

In Spain, AEGON-Union Aseguradora has replaced its mainframe systems with interactive applications running on 30 distributed Data General Unix servers supported by over 70 gigabytes of CLARiiON high availability disk arrays. Until recently, such volume of storage would have required mainframe processing. AEGON recognised that customers prefer to take out insurance with companies which provide fast, competitive quotations and efficient service. By installing a network of servers, AEGON is able to deliver information close to the point of sale where fast decision-making is a key factor in winning new policy business. Local staff are linked directly to Madrid and are able to process policies and claims instantaneously. New policies, formerly several months in development, can now be tailored for each customer within a matter of days giving AEGON a head start in responding to market changes.

A major British bank recognised that companies must change methods of doing business to suit their customers. Abbey National formed a separate telemarketing division to handle a growing trend to purchase mortgage, insurance and other financial services by telephone. Telemarketing relies on rapid response and the efficient delivery of information to the point where customer enquiries are handled. Computer-supported telephony based on open Unix servers is playing a major role in making Abbey National Direct one of the bank's most profitable operations. Calls are routed by a powerful Unix system running automated call distribution software. Financial specialists enjoy rapid response when extracting or entering customer details in the course of a sales call. The system also schedules outgoing calls, quickly refreshing telesales screens with relevant scripts and customer information.

Verlag Hoppenstedt has a high reputation for the quality, speed and accessibility of its financial and business information services. The publisher's large data banks hold share prices, company results, a 'who's who' of business together with comprehensive details of products and markets. Customers throughout many European countries rely on this information to guide their investment, acquisition and marketing decisions.

The transfer of its databases from mainframe to Unix servers has enabled Hoppenstedt to give customers, and editorial staff, direct access to information sources and much more sophisticated search facilities. This fits well with the company's overall business objective to deliver the highest quality information matched precisely to customer requirements.

Svenska Arbetsgivareforeningen, the Swedish employers' confederation, experienced difficulties in disseminating information to its member organisations. Complex reports on economic trends, industrial conditions, remuneration, investment and taxation were distributed on paper. Everyone received the same level of detail.

SAF needed to share an increasing volume of information with staff in Stockholm, regional offices around Sweden, Brussels and via these staff with some 43,000 Swedish businesses. A network of distributed Open Systems servers was chosen.

SAF replaced its existing mainframe with an open network based on 13 AViiON servers. There is now total freedom of communication between SAF, its affiliate associations and member organisations.

The Client/Server environment provides office automation facilities for 400 users, and staff enjoy improved job satisfaction from being able to provide a complete and rapid response to members' enquiries.

H M Customs and Excise Department has also chosen to restructure its computing environment. The government department responsible for collection of indirect taxes and duty is organised into 21 regions with headquarters functions in four other locations. Until recently, it used a mixture of mainframes, proprietary systems and PC networks. This structure did not support the UK government initiatives to distribute budget accountability and delegate responsibility to local management.

To empower managers to achieve local performance and budget objectives, a network of over 200 Unix servers has been designed to handle departmental computing requirements.

Financial and operational improvements have already been experienced in personnel and procurement.

# The Business of the Internet

by Bill Thompson of Computer College (Unipalm Group)

It is barely a quarter of a century since the first computer networks were developed by academic researchers who wanted to connect their computers. Now networks are central to many business IT systems. More and more of these networks are being connected to the Internet.

The Internet is not a single network but a network of networks spanning the globe. It provides the computer equivalent of the telephone system, permitting any computer to communicate with any other computer, wherever it is located. The Internet can be used for file transfer, database services, news and weather reports and even "desktop shopping".

As it has grown, the Internet has changed from an academic and research oriented network to a secure and reliable medium for business communication. The academic and research communities are still significant, and parts of the Internet are still state-funded. However parallel commercial services exist in most countries, and companies like PIPEX are able to provide highly reliable and secure Internet access to companies which do not wish to build their own networks. While there is still a wide ranging debate about the evolution of the Internet, commercial use, once the focus of so much argument, is now dominant.

It is only possible to connect the networks which make up the Internet because they use a standard communications mechanism. Called TCP/IP, it was developed as part of a US government funded project to build robust military networks. It is an "open" standard, not owned by any single corporation or body. Anybody who wants to can develop products which match the standard, and their system will be able to communicate with all other systems developed to the same standard.

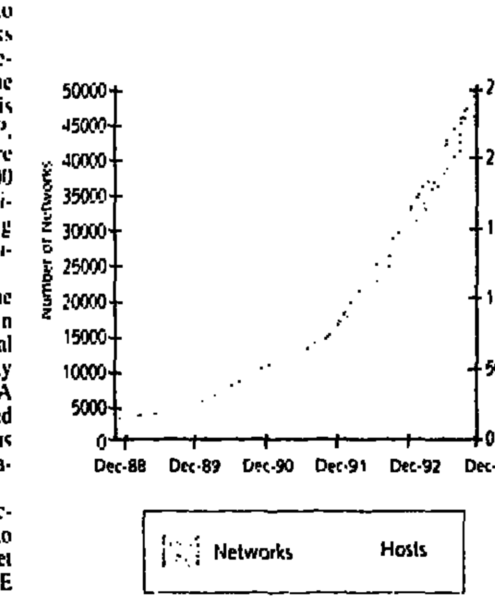
TCP/IP is an excellent example of free market competition in action, since the ideas are available to anyone, making the quality of the implementation the only real differentiator. Products which enable personal computers to connect to TCP/IP networks are the focus of most competition since the market is the largest. A leader in this area is a product called PC/TCP, developed by FTP Software Inc. FTP employ over 400 staff in their US offices, dedicated solely to developing and supplying TCP/IP solutions.

TCP/IP is often called the "plumbing" of the Internet: in conjunction with the physical network it provides the ability to pass computer data from A to B. This connection is used to provide facilities such as electronic mail and information services.

Until quite recently electronic mail was limited to text. However a new Internet standard, called MIME (Multimedia Mail Extensions) allows a text message to be sent with a non-text "attachment" such as spreadsheets, graphics and pictures. A new generation of mail programs, led by Unipalm Group's Mail-IT, is capable of sending and receiving mail with these attachments.

More and more Internet resources are being put into electronic publishing. Many magazines, museums such as the Library of Congress, and commercial services such as Infocheck and the Dow Jones, are all available online. To promote this, new easy-to-use tools are being developed such as NCSA Mosaic which presents the network as a hypertext: a series of connected and cross-referenced documents which can be accessed directly.

Amidst all of the discussion of virtual reality and "cyberspace", many commentators are missing an important fact. The Internet is not a future dream but a current reality for businesses as diverse as Barclays Network Services, using it to exchange data, and the free advertising magazine Loot, using it to link its offices in London, Nottingham and Manchester. We are already making extensive use of networks and it is an oft quoted prophecy that "by the end of the century if your business is not connected to the Internet, you are unlikely to be in business".




Saripah Sayuthi of Malaysia captured enjoying her recent training programme at ICL in Bracknell, England. She was learning how to create effective business solutions as an OPENframework Practitioner. This new breed of systems integrator work from the OPENframework Centres which ICL has established in every continent of the world. Saripah is now back in her local centre in Kuala Lumpar, helping her clients create leading-edge systems for real competitive advantage.

HEWLETT PACKARD/SYBASE CASE STUDY: Prudential Assurance

# Differentiating Home Services with Client/Server systems

by Emma Mansell-Lewis

Prudential Assurance has recently embarked on a major two tier client/server strategy, incorporating its IBM mainframe with Hewlett Packard hardware and a Sybase relational database management systems.

The Home Service business within Prudential represents more than 50 percent of UK premium income. Ron Skelley, systems development manager at Prudential, said, "We can choose to compete on cost alone or we can differentiate ourselves on other fronts. Insurance isn't just about selling. It's about providing advice and service throughout the life of the relationship. Information technology must play a role here."

Prudential has traditionally been an IBM stronghold. However, as Skelley, explained, "Across the company we spend more than £50 million each year on IT but within Home Services our solutions had become inflexible and non cost-effective."

This realisation coincided with the growing desire to support salesmen both outside the office and at point of sale. As he said, "The only branch network was a poor set of PC systems. The sheer aggregation of PC systems was the downfall. There was no communication or information sharing."

This information sharing is critical. Prudential offers a wide range of financial products and, without the correct resource, sales staff were unable to analyse the needs of a customer prior to a visit. Prudential realised that, as Skelley explained, "We have to give branches the necessary customer information across the various business and contract systems we are currently running." He insisted, "We needed a new set of systems and applications for sales teams to utilise customer data, providing front end information, back end support and removing the manual task load."

The decision was taken to implement a two tier client/server system and Home Services Systems began developing its new Customer Information System, CIS, following earlier prototype trials. Prudential believed its CIS solution lay in the Open Software Foundation's Distributed Computing Environment. "I see Open Systems as an architecture within which every type of system can play a part," said Skelley.

Each branch was to be provided with a server and several PCs to provide local power to manipulate information, with a link to the existing IBM mainframe. The company also evaluated mainframe upgrade options and dismissed it. He said the client server approach: "significantly extends the life of our mainframe. It is a classic implementation of client/server technology."

Several hardware suppliers were evaluated, including HP, Data General, Digital Equipment, IBM, NCR and Olivetti. Three companies, NCR, IBM and HP, were then shortlisted for benchmarking, but price performance also had to be matched by the ability to provide central management over a 201 branch network, reference sites, responsive services and technical support. Following this evaluation, Prudential opted for Hewlett Packard HP 9000 Unix hardware for the branch networks.

Sybase was chosen as the provider of client/server based relational database management system. "Sybase won in competition with Oracle, Ingres, Informix and DB2. The company has the right approach to the development of technologies - specifications were both met and exceeded," Skelley said. "Sybase offers good connectivity to IBM MVS environments," he added.

Following a pilot study in eleven offices during 1993, the CIS is being rolled out to branches across the country. Each branch will have an HP 9000 machine and end users will access a consolidated repository of data on an Adabas database held on Prudential Assurance's IBM 3090 mainframe via Sybase's IBM Net Gateway and Open Server for CICS products.

Eileen Hopkins, Business Project Manager for CIS at Prudential, said, "By automating processes such as prospecting, the production of canvassing letters and the management of campaigns, we have produced a system which will not only save the field staff time but also increase their productivity."

ORACLE CASE STUDY: DHL

# DHL Accounts for Growth

Faced with a 25 per cent growth rate year on year, DHL, the largest international air express company in the world, decided to implement a truly pan-European accounting system to meet the financial and management reporting responsibilities of its 17 European offices. It turned to Open Systems and Oracle technology and is already beginning to reap the benefits.

DHL employs more than 28,000 people world-wide, serves some 80,000 locations in over 200 countries and ships more than 80 million packages annually.

Like many large, successful organisations, DHL believes that its company's IT strategy has to be closely aligned to its business if it is to be truly effective.

In 1991, faced with the amalgamation of its European and African operations, DHL decided to revisit its IT needs and look to the future. At that time, DHL's business systems were based on IBM System 36 proprietary technology. As the business was growing, management realised that the existing information infrastructure was not keeping pace with the growth of the company and no longer accommodating its needs.

Realising that the company needed to share information on a European and global basis and after analysing the benefits of dozens of system offerings, DHL decided to follow an integrated open system strategy. A major component of this decision was the implementation of a pan-European accounting application.

According to DHL's financial systems manager, Lesley Hancock: "We needed a supplier that could provide one single integrated solution for all our financial management needs.

"Flexibility, integration and portability apart, other criteria for our system included language, local currency and multi-company capabilities, local support, fulfilment to country statutory requirements, and a billing interface," she said.

Six country controllers representing the European operations were charged with devising requirements for the pan European accounting system and, after a stringent evaluation, chose Oracle Financials and the Oracle database server in December 1992.

The project implementation consists of two phases, planned to be completed within four years. The core Oracle-based financial systems will run on Hewlett-Packard Unix hardware. Initially 96 users will access the system but Hancock expects this to dramatically increase as the system becomes available on-line throughout the UK.

Local DHL offices are free to adjust and extend their local implementation in favour of their specific needs. The basic local system will meet all the legal standards with regard to VAT and be implemented in the required European languages, including English, French German, Spanish, Portuguese, Dutch, Norwegian, Finnish, Italian or Danish.

Oracle Financials is currently being rolled out in the UK with Germany and France expected to be fully implemented by early 1994.

"Since we adopted Oracle technology in the UK, we have already noted considerable business benefits," says Hancock. "At last we have all the data in a single database. Actuals, budgets, forecasts, financial and statistical data is all recorded by Oracle Financials in the Oracle database. This means there is no duplication of data. Data is keyed once only, all analysis and reporting is retrieved from the original source data, the integrity of the data is validated as it is entered into the system and the security of the data is maintained by the system. In our business, the systems must keep abreast of the demands of the market - constantly improving applications is essential.

"By encompassing the latest technology in hardware and software, the business will gain advantages in the stability of the system, the speed of processing, and the accuracy of the data, giving management up-to-date information to ensure that the best possible results are achieved," she says.

Hancock concludes: "On a European level, when all the systems have rolled out, we will begin to see the benefits of consistency, accuracy and timeliness of data. The quality and quantity of information we will be able to extract from the system will mark a significant improvement on the company's accounting history and will go a long way to increasing our efficiency and competitiveness" she said.

# Can Unix challenge the corporate Mainframe?

by Peter Slavid, Corporate Systems Business Manager, ICL.

Over the past few years, Unix has dominated the workgroup and departmental markets, and established a presence on the desktop. But, at the centre of large organisations, there has always been a reluctance to adopt Unix. Large companies have preferred to stick with the mainframe for their large mission critical applications.

There have been good reasons for this. Building corporate systems from multiple "downsized" systems is often a bad fit with the real corporate needs, and imposes a massive management overhead.

Unix Symmetric Multi-Processor (SMP) systems have been ideal for the larger Unix user, but cannot, and never look likely to, reach the levels of performance achieved by the largest mainframes.

Massively Parallel Processing (MPP) technology has always promised better performance but has never been delivered with the reliability, availability and serviceability features which the corporate user has come to expect. Even worse, the parallel world has required users to do special programming.

But now all this is changing. It is now clear that MPP technology will be the future of corporate computing. With the arrival of parallel Relational Databases, the benefits of fully scalable performance can be delivered on an MPP platform up to the levels needed by the largest users.

With the announcement late last year of the Goldrush Megaserver, ICL has staked its claim to be at the forefront of the commercial application of these technologies.

Goldrush is a relational database server, designed to sit in client/server networks, providing a corporate database service with performance levels scalable up to 6000 transactions per second - many times greater than conventional Unix servers.

Goldrush has been hailed as the most exciting announcement in this field and has attracted positive comment from Press and Analysts around the world. There have been two key factors behind this.

The original research programme which created the base for Goldrush was a collaborative venture part-funded by the EEC Esprit project. This collaborative approach has continued, involving the micro-kernel from Chorus Systemes, and the Veritas file management software.

The involvement of Oracle, ASK/Ingres, Software AG and, more recently, Informix has been even more critical. All these database vendors have been actively involved in the porting or development of parallel versions of their databases.

This has been key to ensure that customers' existing databases can be moved to Goldrush without change.

The second key differentiator for Goldrush has been the knowledge and experience which ICL brings from its extensive background in mainframes and the corporate IT environment.

ICL has made a major investment in Goldrush systems management software, resilience features, archiving software and other functions essential to corporate IT customers.

A database server of this scale needs powerful client systems with equivalent levels of corporate strength. ICL's own mainframe users will, of course, be able to link Goldrush directly into their existing systems. But users of competitive equipment will need a different solution.

ICL has an agreement to work with Pyramid Technology Corporation on the development of a "combined" product comprising a powerful Pyramid SMP Nile as Client, linked to a Goldrush Megaserver. This combined product will produce a Unix solution with both the performance and the credibility to tackle work previously possible only on the largest mainframes.

With ICL's background in corporate solutions, and its strong position in Europe, allied to Pyramid's background in data centre Unix, there is every chance that Goldrush parallel technology is on its way to worldwide success.

Whether combined with existing mainframes or with powerful SMP systems, or servicing the needs of multiple distributed Unix systems, the corporate database server is now a real alternative for forward looking corporate users.





# Taking the open route with UniForum UK

by Martin Banks, Editor, Open Forum.

The key element of the Open Systems philosophy is communications, at the widest possible level. There is the obvious level of communications between different computers and their applications, it is the growing need for this amongst users which drove them towards Open Systems in the first place.

But achieving this requires another level of communication: between the users and the suppliers of computer systems, and between the suppliers themselves. This is where the worldwide UniForum movement has played a significant role over its 14 year history.

UniForum UK is part of an international network, with the UK organisation affiliated to some 39 other UniForum organisations around the world. Each one has the same fundamental goal, to promote the understanding and use of Open Systems concepts and technologies amongst their local user communities.

"As a not-for-profit organisation", says Philip Flaxton, Commerical Director of UniForum UK, "we are able to devote all available resources into spreading the word as far as we can. We have a large and growing number of users who are members, both in business and in Government. In addition, all the leading suppliers of Open Systems technology are members, many of them taking out membership with every UniForum organisation around the world."

The board of UniForum UK reflects this esential mix of users and suppliers. Board members come from both sides, to ensure that there is strong representation of the views and needs of each. To ensure balance, the chairman of the board is an annual appointee, one year coming from the supplier community, and the next from the users.

"We have a wide and growing number of routes to users through which we provide information on what is happening in the Open Systems market," Flaxton said. "We have our monthly magazine, Open Forum, which covers the latest technology in Open Systems and how it can be exploited to their advantage by users. We also publish a range of other publications such as our User Case Book, which gives the users much needed pointers as to how others have successfully implmented Open Systems solutions."

There is a new programme of seminars covering both the technology and its implementation. The first of these, organised together with the Financial Times, was targeted at IT consultants.

UniForum UK is also the sponsor of a new exhibition, Enterprise IS, to be held at London's Earls Court in October. Organised by Blenheim On-Line, early responses from both the Open Systems suppliers and users strongly suggest that this will be one of the most important exhibitions of its type ever.

As possibly the largest worldwide organisation dedicated to promoting Open Systems, there are a large number of reasons why both suppliers and users should be members of their national UniForum organisation. Not least of them is that, as the industry moves toward adherence to a single, unified specification for the Unix operating system (itself the key to most Open Systems solutions), one of UniForum UK's closest allies is the organisation with the task of ratifying the standard: X/Open.

"Perhaps the most important reason," Flaxton suggests "particularly for users, is the development and promotion by UniForum UK of a set of Trading Standards. These comprehensively cover all aspects of Open Systems trading, from how to choose an Open System supplier through how to ensure that end users are trained properly."

Even here the need for open communications between the users and suppliers underpins the standards that UniForum UK has defined. For example, it is self-evident that such standards should ensure the suppliers provide solutions that are fit for the task, and that they are well supported. But it is equally important that the standards ensure users have a clear understanding of what it is they are buying, and why.

This epitomises what UniForum UK stands for. Open Systems is all about collaboration, and UniForum provides the meeting ground on which the users and suppliers can discuss their problems, communicate their needs, and ultimately collaborate on providing effective solutions for them.

Information on the wide range of activities and services provided by UniForum UK is available on tel: 081 332 0455 or fax: 081 332 0448.

## DTI asks: "Are your information systems giving value for money?"

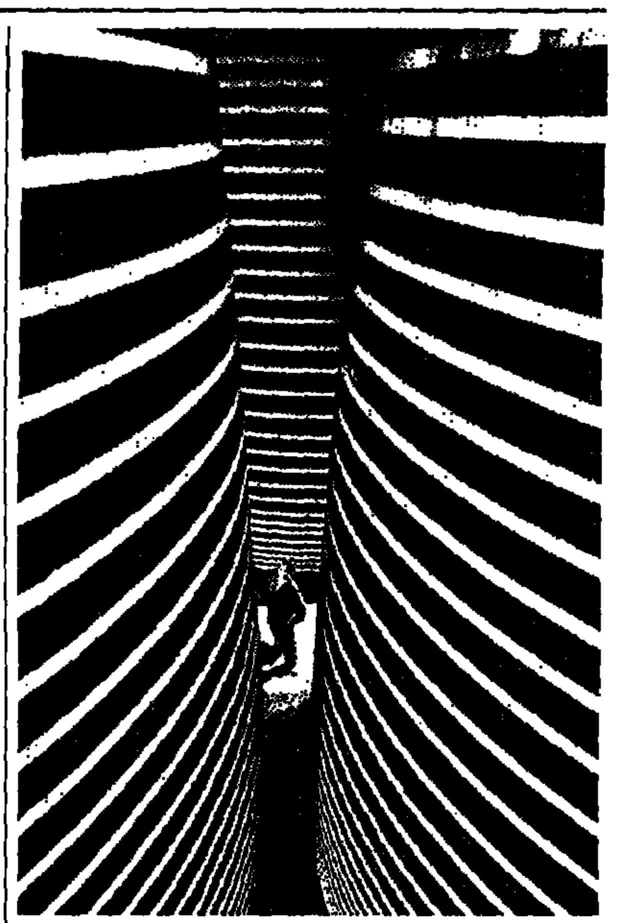
Buying the right information systems is a real worry to many business and frequently results in cutting deeply into profits that are meant to secure without providing clear benefits. Consequently many companies happily pay a premium to their IS suppliers in an effort to buy reassurances.

If they had better information about the type of systems they were buying in the first place, such companies would make better informed decisions about their investments in IS, and might save themselves money.

OSIS is designed to help here. OSIS is an on line information service allowing subscribers easy unlimited access to a database of open systems products and services, simply by using a desktop computer and a telephone line. It is run by NCC and Level-7 and is a specific product of DTI's five year Open Systems Programme.

The project is receiving initial backing from Bull, IBM and ICL. At a subscription of £75 pa it is an unbiased self-help facility which offers particular good value to smaller companies.

For further details ring 061 876 0515



**Martin Wynn, I.T. Director, HP Bulmer.**

**Cider producer, HP Bulmer requires information systems flexible enough to support its leading position in a volatile industry. Opting for an open systems strategy, based on Oracle and Unix, Bulmer expects to halve its hardware and software maintenance costs over five years. This has changed the way IT is viewed, from a cost burden to a vital ingredient in Bulmer's commercial success.**

**For further information, please contact: Oracle: UK 0344 860066**

# Open distributed computing: IBM puts the focus on the user

There's no longer any doubt that IBM's approach to open distributed computing is focussed on customer needs. Its leading technologies and experience are helping customers to achieve the benefits of open systems - not in a mythical future, but today.

Right from the start of the open systems movement, IBM has been opening up its systems by building in open standards conformance (eg. AIX on RISC System/6000 and Open Edition/MVS on its mainframes). Responding to the realities of the marketplace, IBM has licensed best-of-breed products from other vendors, as in the case of Hewlett Packard's OpenView. IBM is also licensing its industry-leading technologies, such as CICS, to other vendors and offering IBM designs as a basis for industry-wide standards.

But customer choice dictates that vendors compete: so, as with ADSTAR Distributed Storage Manager, IBM offers its own software on other vendors' platforms. In addition, IBM has been strong in its cooperation with other vendors within consortia like X/Open and COSE whose goal is to achieve standards across the industry, and with organisations like OSF (the Open Software Foundation) who are sponsoring the development of the products required eg. DCE.

But open systems mean nothing if they don't deliver the solutions the customer needs to support his business. Amongst many examples of IBM working with its customers to make the idea a reality, is a recently-privatised utility in the UK. Supported by IBM from design and planning through to the implementation phase, the company re-engineered its IT to allow a radical change in the way it does business. It moved from a host-based to a two-tier open client/server environment with centralised database servers (MVS and AIX running DB2 and ORACLE) networked together, and integrating HP's image system.

So, IBM's open distributed capabilities are focussed on providing users with access to information wherever and however they need to use it. The goal is distribution with integration



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# Terminal emulation opens up computing at Kent County Councils's Highways and Transportation Department

by Annabelle Brown

A strategy of standardisation and simplification has provided a relatively painless downsizing path for Kent County Council's Highways and Transportation department. The adoption of terminal emulation, giving users the power to run PC applications and access Unix facilities, has been a key part of this process.

The job of looking after Kent's 5,513 miles of road, and 4,200 miles of footpaths, bridle ways and byways falls on the Highways and Transportation department of Kent County Council.

The department is responsible for the design and repair of Kent's road systems, for providing public transport services and looking after the important area of road safety.

Like many councils, Kent has gone through a process of downsizing its computer systems, which began about five years ago. From a situation where most of its computing was done through the council's mainframes, the Highways and Transportation department is now the proud possessor of a Unix-based departmental server system which is virtually autonomous from other council systems.

The departmental server system now established has given end users greater power at the desktop than ever before. No matter where in the county they are based, they can utilise PC-based applications - both office applications and specialist PC highways applications - and they can also access office and sophisticated database type applications on the Unix minicomputers.

In addition, the system incorporates workstations for power-hungry graphical applications such as computer aided design (CAD) and geographical information systems (GIS).

Originally, access to the ICL minicomputer systems running Unix was via dumb terminals. As time went by, requirements changed. Richard Meade, operations team leader of information systems for the department, said: "As users needed to replace dumb terminals, they started asking for PCs, so they could use a better spreadsheet or a particular word processor.

"The solution was to install PCs gradually and to link them into the Unix systems with terminal emulation software."

Terminal emulation software provides PCs with immediate access to host applications and data, plus the ability to transfer files. When used in conjunction with related connectivity products, terminal emulators allow users to bring host information to the desktop over virtually any network from a wide variety of host computers.

WRQ's Reflection 2 for DOS was chosen as the standard emulator and was supplied and installed by WRQ's sole UK distributor Wick Hill IMX.

Today, the Highways and Transportation department has around 300 PCs running Reflection 2 for DOS, some ten running Reflection 2 for Windows, and only a few dumb terminals remaining.

Around ten of the PCs have WRQ's Telnet Connection (part of WRQ's Reflection Network Series), which allows for faster file transfer for users needing to transfer heavy amounts of data, such as large map files.

The department also has 19 groups using local area networks. PCs within the local area networks are connected to the main network via Reflection.

Applications on the PCs have grown. Office applications such as Word, Excel and PowerPoint are widely used. A range of PC-based specialist highways applications for such tasks as dealing with street works opening or traffic system modelling have also been adopted.

Additionally, the department has a large number of key Ingres databases, which can be accessed through the PC. These are for important areas such as quality assurance, accidents and bridge records.

**"Terminal emulation has also been able to accommodate our changing requirements."**

Clive Bonner, IS Services manager for the department, says: "We were able to go painlessly from Unix minicomputers with dumb terminals attached to them, to having PCs which still looked like terminals. Reflection is easy to use, so we haven't had to spend a lot of time and money on training staff. Terminal emulation has also been able to accommodate our changing requirements."

# Code of Practice launched

Late last year saw the launch of UniForum UK's Code of Practice, and Don Folland, chairman of UniForum UK's Trading Standards Committee, used the occasion to offer some of the biggest names amongst UniForum UK's trading members a challenge - to be amongst the first to voluntarily adopt the Code's provisions.

'I realise that many of these companies, the household names of the open systems business, probably use internal trading standards that are the equivalent of the Code,' he said, 'so they probably already comply with the standard we have laid down. Stage one is in the process of getting the Code widely accepted: getting the supply side of the industry to comply with its provisions. To begin with this will be on a voluntary basis, and as the base of compliant companies increases so it is hoped that the number of applications from other trading members will also increase.

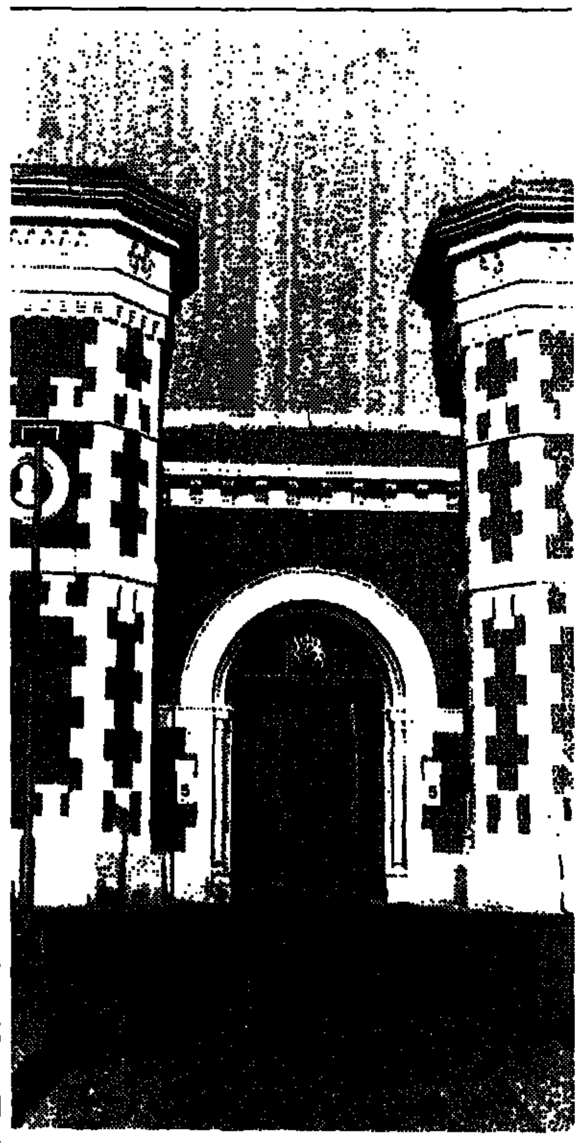
This will attract the customers who are looking to do business, wherever possible, with suppliers that have some mark of approval for both their competence in their products and their ways of doing business.

'With the big names on board,' Folland added, 'we can then attract the smaller vendors such as the value-added resellers. These are the companies that really need a Code of Practice and the recognition that they comply with it. Perhaps the most important feature of the Code of Practice is that it lays stress not only on the seller to behave according to a set of rules, but also on the buyer to know what it is they are buying. The key to ensuring that this step is taken is the introduction of a Memorandum of Understanding (MOU).

'The MOU is the fundamental document in the Code of Practice,' Folland said. 'It will be signed by both the vendor and customer, so that both sides know and understand what it is that is being bought, for what purpose it is intended and how it should fit those objectives.

The Committee's work has not been conducted in isolation. It has taken on board the work already done by the Computing Services Association, and is in current discussions with FAST, the Federation Against Software Theft, to harmonise their respective efforts. FAST is moving towards the development of an accredited reseller scheme of its own.

The Code's provisions are directed primarily at UniForum UK's trading members, who will be entitled to display a 'Trading Standards Compliant' (TSC) logo once accepted into the scheme.



**Operational staff and management in 127 prisons throughout England and Wales will have better access to the data they hold about inmates thanks to a half million pound deal with Winchester based IQ Software Corporation for Intelligent Query Report Writer (IQ). Easy to use, IQ runs in most computer environments and supports a wide range of databases making it an ideal corporate-wide approach to information systems for end users.**

# 'Test driving' Digital Alpha AXP Systems on The Internet

Increasing demand from the UK corporate sector has led Digital to expand on its popular Alpha AXP Internet programme by making six new Alpha AXP Unix systems available to customers through Internet.

The company is also upgrading the two existing DEC 4000 AXP systems to 256 Mbytes of memory each.

The programme provides customers with access to the Alpha AXP system to test, qualify, or port software, before making the decision to purchase.

To date, 2,555 customers from 27 countries in 1,127 organisations have "test driven" the Alpha AXP system.

Software developers have also used the system to port 90 applications to the DEC OSF/1 operating system, to add to the over 2,500 OSF/1 applications already available.

Historically, Internet has been used mainly by educational bodies for the exchange of research, data and statistics. Today, the Internet system is working for industry and commerce, offering worldwide communication with services such as E-mail, file transfer, and remote access through Telenet.

UK organisations currently connected to Internet include Barclays, Phillips, National Power, Eagle Star, The National Trust, Local Government, the NHS, and the BBC.

"In a recent speech to the National Press Club, US vice president Al Gore emphasised the importance of using the information superhighway to increase commercial activity, improve education, and to provide better access to information," said Rob Noble, Digital UK's Alpha AXP marketing manager. "Today, Digital is exclusively using Internet to achieve these goals."

New Alpha AXP systems on the Internet include two DEC 3000 Model 800 AXP workstations. Digital is also adding an Alpha AXP Farm 2000 to the Internet. The Farm is comprised of four DEC 3000 Model 600 UNIX workstations connected via a GIGAswitch network, and special farm/cluster software. AXP Farms give customers the flexibility to operate in either a batch or parallel environment on the same system.

To register for an account, Internet users connect to:axposf. pa.dec.com, or 16.1.0.14 via telnet, or rlogin, then login as axpguest (no password).



# Tuxedo makes OLTP fit Open Systems

by Duncan Baldwin

Open Systems means different things to different people. However there is one product that over 50 suppliers, including Amdahl, Bull, Data General, Digital Equipment, ICL, Sequent and Tandem, agree upon as being a key participant - the Tuxedo(r) System for managing On-Line Transaction Processing (OLTP).

The Tuxedo system is in production use in retail, banking, insurance, manufacturing, reservation, trading, telecommunications, financial, government and medical markets worldwide.

A number of European banks have been quick to see the advantages of using Tuxedo to provide fast and accurate electronic banking whilst at the same time remaining responsive to customer demands, for example Credit Agricole de Chartres in France and Credit a l'Industrie in Belgium. In the UK, ICL are developing a new generation of Retail Banking systems using Tuxedo's advanced client-server architecture.

Following the acquisition of AT&T's Unix System Laboratories, the ownership of Tuxedo has now passed to Novell, where it is being integrated with the new generation of networking technologies. Novell licenses Tuxedo to other companies who in turn incorporate it into their product portfolios. Today, according to the Gartner Group, Tuxedo has a 56% market share of the Unix OLTP market and this market is expected to double in size in the next two years.

Why is Tuxedo so important? The dominant trend driving companies' investment in information systems is 're-sizing', in other words the process of placing applications on platforms that offer superior price-performance. This trend is largely responsible for accelerating the growth of distributed client/server computing. Furthermore, the solutions are increasingly based around a Unix Open Systems strategy.

The distribution of both applications and databases inherent in re-sizing exercises has ushered in new opportunities for application designers and system administrators. Standard interfaces are providing application developers with an unprecedented choice of processors, presentation front-ends and databases. All of which can be independently changed as circumstance dictate - plug and play. Part of this new wave of development is the evolution of what was once the traditional mainframe-based Transaction Processing Monitor into a new generation of middleware - the Client/Server Monitor. The Tuxedo(r) System is Novell's Client/Server Monitor.

The function of Tuxedo as a Client/Server Monitor is to improve performance, ensure data integrity and provide the essential services that are necessary for distributing and managing business-critical client/server applications. These include distributed transaction processing services, various client/server-specific capabilities, connectivity services, application management and administration services and naming services.

The Tuxedo System pedigree can be traced to a distributed application developed within AT&T more than a decade ago. Since then, Tuxedo has been enhanced with many new features and has been pivotal in X/Open's XA, TX and XATMI Specifications for Distributed Transaction Processing. Platform support has grown dramatically, with Tuxedo now offered on over 25 platforms, including most Unix implementations, MVS and VMS, with new ports expected to other popular platforms, such as AS/400. Tuxedo supports connection to desktop platforms such as DOS, Windows, OS/2, Macintosh and Unixware and supports all of the popular databases. Over 20 development tool vendors support Tuxedo for developing client-side and server-side components.

When the AIC Correct Group in Netherlands developed a new stock control and ordering system for their consumer and business electronics business they chose Tuxedo. A bonus that has also been noted by other companies is that applications developers new to Tuxedo become productive more quickly than with traditional technologies, so reducing development costs.

The performance benefit that Tuxedo gives can be seen in the audited benchmark reports from the Transaction Processing Council. Many hardware vendors have used Tuxedo to achieve an unprecedented range of performance from 51 TPS (Transactions Per Second) to over 1000 TPS across a range of processors, operating systems and databases. In some cases Tuxedo was used in favour of in house products.

**The new ICL servers are good looking as well as powerful and dependable. Scandinavian design has given them soft lines, a curved top and a range of elegant colours making them as different from every other server, as your business is different from every other business. These new servers give you freedom of choice - ensuring your business can respond to change and compete and thrive in today's dynamic world.**